A Framework for Understanding Food Insecurity:

- An Anti-Hunger Approach
- A Food Systems Approach

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*
Introduction

The concept of food insecurity was adopted in the early 1990’s as a useful framework for describing, researching and designing policies to address poverty-related food access problems at the household level in the United States (Hamilton, 1997). Poverty, hunger, and food insecurity are closely linked. In the simplest terms, these conditions are the result of not having enough money to afford enough food, given the many other budget constraint that a household faces, such as rent, utilities, clothing, and transportation. The reasons why people cannot access enough food go well beyond these constraints and extend to issues such as access to grocery stores, employment and social services. Hence, on a conceptual level, the interrelations are quite complex. But on a human level, the reality is startlingly simple. To paraphrase a traditional Chinese proverb: “Well-fed people have many problems, hungry people have only one.”

Understanding the causes and consequences of food insecurity not only helps in alleviating food access-related problems and hunger, but also can help in improving the quality and effectiveness of clinical care, and facilitates the prevention and treatment of many kinds of health problems. However, researchers’ and policy makers’ efforts to use the framework of food insecurity have been continually hindered by the lack of a clear conceptual definition and a valid and reliable measure of this condition. This paper seeks to address this problem by clarifying the underlying concepts of food insecurity and providing resources for further exploration. It is intended as a starting point for a conceptual framework that encompasses a range of problems and solutions on a continuum, from emergency food programs to entrepreneurial projects. Its premise is that problem specification, rigorous evaluation of methods, consensus on methodology and an adequate basis for evaluating the accuracy and credibility of individual assessments would all be enhanced by resolving the fundamental conceptual issues.

A comprehensive framework for food security must span several scales – international, national, community, household and individual. In working towards food security and sustainability, some analyses and actions will need to be local; others will need to be national or international. While initially food security was defined at the national or global scale, it soon became clear that aggregate measures missed variations in food insecurity within households, communities, and regions. According to the World Bank (1986) incomes and food consumption vary more within households and regions than among countries. The hungry are the poor, mostly women, children, ethnic minorities, and the elderly (Nestle, 1992), a fact that has been reflected in federal food
programs, which are directed to these vulnerable populations. Even with these programs, these vulnerable
groups tend to be those most in need of emergency food services.

The issue of food security is complex in nature, and therefore calls for complex solutions. This inherent
complexity makes it difficult to describe and address it in a comprehensive manner. The goal of this paper is to
present where we are today in a thought-provoking, non-controversial manner without attempting to be
exhaustive. It is aimed primarily at practitioners, not an academic audience, and should be used as a practical
guide to tools. It begins by exploring the concepts of food security and insecurity, and goes on to examine food
security and methods of measuring it at the household and community levels. It also describes food assistance
programs established to promote food security among limited-income populations. This document is structured
along the lines of two broad approaches to food security – an anti-hunger approach and a food systems
approach. Possible broader studies of structural changes in society to eliminate root causes of poverty and
unequal access to resources including food are beyond the scope of this paper. The original approach towards
food security was an anti-hunger based approach which had the goal of meeting the immediate food needs of
limited income people, and focused on food insecurity at the level of individuals and households. The food
systems approach arose out of a desire to address food security in a more comprehensive manner. As early as
1989, food security came to be recognized as a problem of a community rather than that of an individual.
Consequently community food security (CFS) is based on a community-based and prevention-oriented
framework that focuses on both immediate and long-term food security for the community and puts emphasis
on building local and regional food systems. While CFS approaches partly reflect the basic principles of the
anti-hunger work, the CFS model has elements distinct from traditional hunger models. Differences between
anti-hunger and CFS approaches are shown in Table 1 (Winnie, 1997).

Numerous public and private efforts have been undertaken to resolve the abundance and absence of
food, but American society continues to lack a systemic, long-term approach to meeting the food security needs
of its entire population. Traditional food programs are often seen as a stop-gap, failing to address the need for
developing long-term approaches to food security. On the other hand, CFS can be part of a systemic, long-term
approach but cannot be a substitute for basic food programs that provide regular food access, especially for the
most vulnerable populations. Both traditional hunger-based food programs and community food security
projects contain promise for meeting people’s food security needs. Achieving food security requires both a
process of developing self-reliant food systems and a political effort to achieve justice and equity. Building on
the relative strengths of each approach, these two approaches can work together to overcome the forces that
have produced food insecurity (Allen, 1999).
<table>
<thead>
<tr>
<th></th>
<th>Anti – Hunger</th>
<th>Community food security</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>Treatment; social welfare</td>
<td>Community development</td>
</tr>
<tr>
<td><strong>Unit of analysis</strong></td>
<td>Individual/Household</td>
<td>Community</td>
</tr>
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<td><strong>Time frame</strong></td>
<td>Shorter-term</td>
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<td><strong>Goals</strong></td>
<td>Social equity</td>
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<td><strong>Conduit system</strong></td>
<td>Emergency food, federal food programs</td>
<td>Marketplace, self-production, local/regional food</td>
</tr>
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<td><strong>Actors</strong></td>
<td>USDA, HHS</td>
<td>Community organizations</td>
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<td><strong>Agriculture relationship</strong></td>
<td>Commodities</td>
<td>Support local agriculture</td>
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<tr>
<td><strong>Policy</strong></td>
<td>Sustain food resources</td>
<td>Community planning</td>
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</tbody>
</table>

SECTION I: The Concept and Prevalence of Food Insecurity

Food Security: Concepts and Terminology

Food security is a concept that has evolved, developed, and diversified considerably over time. It is a term that has many definitions across disciplines and is used differently in international, national, and local contexts (Power, 1998). According to Hoddinott (1999) there are “approximately 200 definitions and 450 indicators of food security.” Just what the term “food security” means still remains unclear. However, three important aspects of food security can be distinguished:

- First, food security requires safe and nutritionally adequate food supply (i.e. agricultural capacity to produce the total amount of food required by the population or the resources to purchase food requirements when necessary).
- Second, food security requires a reasonable degree of stability in the food supply from one year to the next and during the year (i.e. food security means having adequate food storage capacities or other means of savings for times of crop failure or other emergencies).
- Third, and most critical, is the need to ensure that each household has physical, social and economic access to enough food to meet its needs. This means that each household must have the knowledge and the ability to produce or procure the food that it needs on a sustainable basis. Food security is related to food purchasing power and is therefore dependent on adequate and secure employment.

1.1 Historical/Evolutionary Perspective:

From its simple beginnings, food security has become a cornucopia of ideas (Maxwell, 1996). The concept of “food security” first appeared in international development work in the 1960’s and 1970’s (von Braun, 1992), as the ability to meet aggregate food needs in a consistent way. Maxwell (1996) has listed 32 definitions of food security and insecurity published between 1975 and 1991 (Appendix A). According to Maxwell (1996) the first definition, born out of the World Food Conference in 1974, emphasized food security as a concept centered on 2 sub-concepts; food availability and food entitlement. The first, food availability, refers to the supply of food available at local, national or international levels. The second, food entitlement, refers to the capability of individuals and households to obtain food. It suggests that people do not usually starve because of
an insufficient supply of food but because they have insufficient resources, including money (entitlements), to acquire it (Sen, 1981). Thus, it has been impossible since the early 1980's to speak of food security as being a problem of food supply, without making a reference to the importance of access and entitlement.

The Food and Agriculture Organization (FAO) defines food security as a situation where “food is available at all times, that all persons have means of access to it, that it is nutritionally adequate in terms of quantity, quality and variety, and that it is acceptable within the given culture." Key elements or dimensions in the definition include food availability, access to food or equity, food safety, sustainability of food production and cultural acceptability.

In the international context, food security is discussed on three different levels (Power, 1998):

- national
- household
- individual

At the national level in the U.S., the concept of food security was brought to prominence by the 1990 Farm Bill which identified food security as an objective of U.S. food assistance programs. In that legislation, food security was defined simply as "access by all people at all times to sufficient food to meet their dietary needs for productive and healthy life." The United States Agency for International Development Food Aid and Food Security Policy Paper (1995) and the U.S. Position Paper for the World Food Summit in Rome, Italy (November, 1995) further expanded and refined the definition to encompass the three dimensions of 1) access (individuals and households have the resources to acquire appropriate foods for nutritious diet), 2) availability (sufficient quality of appropriate quality food supplied via domestic production or imports) and 3) utilization (adequate food available with water, sanitation and health care). As a result of the World Food Summit, this definition has been accepted by most nations.

In general, definitions of food security in the U.S. context tend to emphasize two different means of achieving food security (Power, 1998):

- the elimination of poverty and,
- the creation of an environmentally sustainable food system.

Over time, there has been a gradual shift in the emphasis/definition/notion of food security from a global and national level to a household and individual level. According to Bickel (2000), food security is a universal dimension of household and personal well-being. This concept is reflected in the most widely used definition of food security of the World Bank (1986) which is: “Access by all people at all times to enough food for an active, healthy life." The emphasis is on individual access, in all seasons and all years, and to enough
food not just for survival, but for active participation in society. The Sub-Committee on Nutrition within the UN Administration Committee on Coordination (ACC/SCN) in defining food security at the household level brings in further dimensions. “A household is food secure when it has access to the food needed for a healthy life for all its members (adequate in terms of quality, quantity, safety, and culturally acceptable) and when it is not at undue risk of losing such access” (Saad, 1999).

Today, food security includes the ready availability of nutritionally adequate and safe foods and the assured ability to acquire acceptable foods in socially acceptable ways (e.g., without resorting to use of emergency food supplies, scavenging, stealing, and other coping strategies) (Nitzke, 1998).

For additional definitions of food security refer to Leidenfrost, 1993.

1.2 What does it mean to be Food Insecure/Food Insecure with Hunger?

Food insecurity refers to a lack of access to enough food. Food insecurity exists whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited and uncertain (ADA, 1998).

The concept of food insecurity as thought about in the U.S. includes not only the lack of availability, access and utilization or use of food (e.g. food preparation, intra-household food distribution), but also perceptions, (e.g. that food is insufficient, inadequate, unacceptable, uncertain, or unsustainable). For example, food insecurity has been defined in the U.S. as “the inability to acquire or consume an adequate quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so” (Radimer KL, 1990; 1992).

Food insecurity is experienced differently at the household level and at the individual level. The experience differs between adults and children at the individual level. Food insecurity is a continuum that progresses from uncertainty and anxiety about food at the household level to the extreme condition of hunger among children when they do not have enough to eat. It is caused by circumstances (such as low or unstable income) that lead to inadequate means of food acquisition. The experience of food insecurity can be modified at the household and individual levels by such coping tactics as obtaining supplemental food from emergency food programs, strategic food buying and restricting food intake.

There are two kinds of food insecurity: 1) transitory and 2) chronic. Transitory food insecurity is a temporary decline in a household’s access to enough food. The transitory food insecure households are ones that, under normal circumstances, are able to produce or gain access to their basic food needs. However, they are vulnerable to food supply problems when external shocks affect their food productions systems or
distribution chains for a limited period of time. For rural populations this is generally related to events which have a seasonal impact on crop production, (e.g. drought and floods). For urban populations it is related to the availability of and the ability to access food through purchase in the marketing chain (Lynton-Evans, 1997). Transitory food insecurity is the least severe form of food insecurity. Adults who believe they are temporarily food insecure may try to avoid hunger by cutting the size of meals, skipping meals, storing seasonal foods for long term use, or even going without food for one or more days (Klein, 1996). Events resulting in transitory food insecurity are usually of limited duration and once conditions return to normal, the affected population is usually able to rapidly recover its food security.

Chronic food insecurity, on the other hand, is a consequence of a continuously inadequate diet caused by the inability to acquire food. Poverty is considered the root cause of chronic food insecurity (Saad, 1999). The chronically food insecure include those sectors of the population which lack adequate income, assets and/or resources at the household level to produce or otherwise gain access to the basic food needs of the household. In such a situation when food is extremely limited, the above-mentioned means to avoid hunger are ineffective and cause severe personal hunger and hunger that spreads throughout the family and children (Klein, 1996). Chronic food insecurity results from structural problems and as such cannot be overcome by periodic interventions of emergency food. Its resolution requires programs aimed at identifying and conquering the underlying reasons for the population's inability to produce sufficient food crops, or other economically tradable outputs, (e.g. non-food crops, to meet their needs). In the meantime, they require continuing support programs aimed at providing the means for them to gain access to meet basic food needs. Meeting the supplementary food needs of such populations would be considered to be a function of specialized government sponsored relief programs such as food for work, food stamps or other targeted interventions (Lynton-Evans, 1997).

For additional definitions of food insecurity refer to Leidenfrost, 1993.
2.1 Purpose:

The objective of any system of food security and nutrition monitoring is to provide information and interventions, to improve the food security and nutritional status of the population. Adequate measurement and monitoring methodology will lead to a better understanding of what food insecurity is, how it changes over time, what the context of that measure is, what are the causes, what are the correlates, and how it may differ across sub-populations. It will also aid policy makers in formulating prudent policies and in implementing effective interventions to improve food security and nutrition (Babu, 1994).

Reliable methods of measuring the prevalence and severity of food insecurity and hunger are important to gauge progress on reducing hunger. For instance, when measuring the food security status of a household, several conditions, behaviors, and situations have to be measured. These include anxieties about the insufficiency of the household budget for food, perception about the inadequacy of food intake, and instances of reduced food intake. Food security measures providing good estimates of food insecurity will improve targeting of programs designed to alleviate hunger and will result in responses that are most appropriate according to the nature and severity of the problem (ADA, 1998).

Food security measure is therefore the key link between the setting of program objectives and examining program outcomes.

2.2 How is Food Insecurity Measured?

Food security cannot be measured directly. It must be ascertained by obtaining information on behaviors and situations that indicate the condition of food insecurity. The measurement of food insecurity at the household or individual level involves the measurement of those quantitative, qualitative, psychological and social or normative parameters that are central to the experience of food insecurity, qualified by their involuntary nature and periodicity (Campbell, 1991).
2.3 Development of Food Insecurity Measures

Researchers in the U.S. have developed and validated indicators to measure household food insecurity at a population level. Various approaches have been used to measure food insecurity based on the essential components at the individual and household levels. These include the construction of the CCHIP Hunger Index, Radimer-Cornell Food Insecurity Scales, and questionnaire items included in national surveys like NHANES III (Lorenzana, 1999). These instruments have been designed to be administered to the household head or person most responsible for food and food provision in the household, and to provide insight into household food insecurity (Tarasuk, 2001). Details of these measures will be discussed in more detail in the sections to follow.

In response to the National Nutrition Monitoring and Related Research (NNMRR) Act of 1990, the Food Security Measurement Project was started with the key task of developing a standardized instrument for defining and obtaining data on the prevalence of food insecurity in the U.S. for use at the national, state and local levels (Guthrie, 2002). In 1994, USDA’s Food and Nutrition Service, along with U.S. Department of Health and Human Services’ National Center for Health Statistics, jointly sponsored a National Conference on Food Security Measurement and research to synthesize and build upon available work. A consensus was reached on the appropriate concept for a national measure of food insecurity and the best operational form for implementing this measure. The “food security core module” was developed, incorporating a large set of indicator items drawn largely from the CCHIP surveys, Radimer-Cornell measures, and previous USDA and NCHS surveys. After assessing and field testing the food security questionnaire, it was administered as a supplement to the Current Population Survey of April 1995. The monitoring of the nation’s households, using this food security measure is done annually. It is conducted for the USDA by the U.S. Census Bureau as an annual supplement to its Current Population Survey (CPS) (USDA/ERS, 2002; Carlson, 1999).

2.4 What Tools are Available for Measuring Food Insecurity?

Four measures (one single item indicator and three broad scales) are currently available for measuring individual and household food security. Two other single item indicators are also available to measure individual and household food security. It is also important to assess changes in food security at the community level as it relates to systems, environment and policy change. It will enable the implementation of adequate food security initiatives to alleviate hunger and food insecurity at the community level (Keenan, 2001). Two indirect indicators are available for food security assessment at the community level. However, the usefulness of these indicators
is presently limited by the paucity of population-based data on the relationship between them and the prevalence and severity of food insecurity (Tarasuk, 2001).

Table 2 provides a condensed version of the characteristics of the Food Security/Insecurity measures (Keenan, 2001).
Table 2: Characteristics of Food Security & Insecurity Measures (Source: Keenan, 2001)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Methods of Data Collection</th>
<th>Length (Items or Minutes)</th>
<th>Reliability (Cronbach’s alpha; Test-Retest)</th>
<th>Validation</th>
<th>Sensitivity and Specificity&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Comparative Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single items for measuring food security/insecurity at the household level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSFII and NHANES III food sufficiency question</td>
<td>In person, telephone, group</td>
<td>1 item</td>
<td>No test/retest reliability available; Cronbach’s alpha = NA (single question)</td>
<td>The positive responses were associated with higher family intake of kcal, protein, vitamins A, C, and E, B vitamins (B6, folate, riboflavin, thiamine), and minerals (calcium, iron, magnesium, phosphorus, zinc) on NHANES III</td>
<td>Sensitivity: 32% Specificity: 90% in NHANES III</td>
<td>National data available</td>
</tr>
<tr>
<td>EFNEP Reporting System – Behavior Checklist</td>
<td>In person, telephone, group</td>
<td>1 item</td>
<td>( \alpha = \text{NA (single question)} )</td>
<td>Not reported</td>
<td>Not reported</td>
<td>National data available annually</td>
</tr>
<tr>
<td>Concern About Food Security</td>
<td>Telephone</td>
<td>1 item</td>
<td>( \alpha = \text{NA (single question)} )</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Data from 8 states</td>
</tr>
<tr>
<td><strong>Scales for measuring food insecurity at the household level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCHIP</td>
<td>In person</td>
<td>8 items</td>
<td>( \alpha = .80-.89 )</td>
<td>Index strongly associated with economic and sociodemographic variables, reliance on coping strategies, and health problems with children</td>
<td>Not reported</td>
<td></td>
</tr>
<tr>
<td>Radimer/ Cornell questionnaire</td>
<td>In person, telephone, group</td>
<td>13-item subscales</td>
<td>( \alpha = .84-.86 )</td>
<td>Correlated with risk factors for hunger, consequences of hunger, and hunger indicators from other surveys: correlated with total amount of food in household and weekly fruit and vegetable consumption; criterion measure</td>
<td>Sensitivity: 89% Specificity: 63%</td>
<td>Upstate New York, Quebec, CPS-based national data, 1995-99</td>
</tr>
<tr>
<td>Scales for measuring food security at the community level</td>
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<td>---------------------------------------------------------</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Second Harvest NFBNA's</strong></td>
<td>In person</td>
<td>20 minutes</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Selected cities published regularly: <a href="http://www.secondharvest.org">www.secondharvest.org</a></td>
</tr>
<tr>
<td><strong>U.S. Conference of Mayor's Survey</strong></td>
<td>Mail Survey</td>
<td>15 questions to health departments</td>
<td>Not reported with many details</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Selected cities: <a href="http://www.usmayors.org">www.usmayors.org</a>; published annually</td>
</tr>
</tbody>
</table>

a Sensitivity indicates how well a measure identifies the individuals who have a condition (i.e. “true positives”); specificity indicates how well measure avoids incorrect classification (i.e. “false negatives”).

b With recommended two-stage internal screeners, most respondents are asked 5-11 questions (households with children) or 3-8 questions (households without children), depending on skip patterns. Estimated average interview time = 2-4 minutes, depending on level of food insecurity in the population sampled.

c With internal screener, most households (with or without children) are asked 3 questions.

d See page 15 for listing of other national surveys including the Core Module for Food Security Data Collection.

2.5 Individual and Household Food Insecurity Measures:

- **Single Item Indicators:**

  Three single indicators are commonly used for measuring household food insecurity.

1. **The Food Sufficiency Question**

   The food sufficiency question developed and used by the USDA in every food survey since 1977 including the Nationwide Food Consumption Survey (NFCS) and the Continuing Survey of Food Intakes by Individuals (CSFII) is:

   Which of the following statements best describes the food eaten in your household?
   1. Enough of the kinds of food we want to eat
   2. Enough but not always the kinds of food we want to eat
   3. Sometimes not enough food
   4. Often not enough to eat

   A shorter version of this question was used in the Third National Health and Nutrition Examination Survey (NHANES III). This did not include the 2nd (food quality) response option. The USDA analyzed both versions and found that the two versions produce significantly different results. The NHANES III has excellent specificity but poor sensitivity and underestimates prevalence (Frongillo, 1997). This does not reflect poorly on the NHANES III per se, but shows that no single item indicator is sufficient for assessing hunger and food insecurity. It would not be good therefore for program evaluation and needs further research.

2. **The Expanded Food and Nutrition Education Program (EFNEP) Evaluating/Reporting System Question**

   This second single item indicator is used for EFNEP reporting. It is based on focus group research conducted in 1992. This single question about food security asks:

   How often do you run out of food before the end of the month?
   1. Do not run out of food
   2. Seldom
   3. Sometimes
   4. Most of the time
   5. Almost Always

   A probable weakness of this question that was pointed out by Dr. Ruby Cox, EFNEP coordinator, for Virginia Tech Cooperative Extension Service, was that although people orally reported that food insecurity is an
issue with them, they are unwilling to write this on their behavior checklist at program entry when they do not know or trust their educator. The participants therefore may be offering socially desirable responses and may be more willing to admit to their true food security status by the time they have finished their session. No reliability and validity data exists currently for this question.

3. **Concern about Food Security Question**

   The third single item indicator is the question on the concern about food security that is included in the Social Context module of the Behavioral Risk Factor Surveillance System. This asks for a “yes” or “no” response to the question:

   “In the past 30 days, have you been concerned about having food for you or your family?”

   This has been included on telephone surveys conducted by 8 different states since 1996. No reliability or sensitivity of this question has been reported. Also no studies of the validity of this item have been done (Keenan, 2001).

- **Scales:**

   There are three broad scales that have been developed to measure the severity of food security and hunger at the individual and household level.

1. **Community Childhood Hunger Identification Project (CCHIP)**

   The CCHIP Hunger Index was one of the first scales developed to measure hunger and risk of hunger at the household level, in limited-income families with at least one child under 12 years of age. The project coordinated more than 20 local, regional and state-level standardized sample surveys throughout the country over the period 1985-1995 (Carlson, 1999).

   The scale consists of eight questions designed to indicate whether adults and/or children in the household are affected by food insecurity, food shortages, perceived food insufficiency or altered food intake due to constrained resources (Table 3). It helps classify households into 3 groups – not hungry, at risk of hunger and hungry. This is an additive scale, where a score of 5 or more affirmative/positive (Yes) responses is indicative of food shortage affecting all members of the household including children. These families are considered as “hungry”. A score of 1 to 4 is indicative of the family being “at risk of hunger”. A negative response (No) means a food secure household i.e. “not hungry”. The scoring of this eight item scale is based on the number of “yes” responses and comparing the total to the guidelines provided.
Table 3: Community Childhood Hunger Identification Project’s Hunger Scale†
(Source: Campbell, 1991)

| 1. Does your household ever run out of money to buy food to make a meal? |
| 2. Do you or members of your household ever eat less than you feel you should because there is not enough money for food? |
| 3. Do you or members of your household ever cut the size of meals or skip meals because there is not enough money for food? |
| 4. Do your children eat less than you feel they should because there is not enough money for food? |
| 5. Do you ever cut the size of your children's meals or do they ever skip meals because there is not enough money for food? |
| 6. Do your children ever say they are hungry because there is not enough food in the house? |
| 7. Do you ever rely on a limited number of foods to feed your children because you are running out of money to buy food for a meal? |
| 8. Do any of your children ever go to bed hungry because there is not enough money to buy food? |

†Hunger criterion: five positive responses out of eight.

How useful and effective is it?

Strengths:
- This form of CCHIP eight items questionnaire, with ‘yes/no’ responses can be easily and quickly administered in face to face interviews.
- Reliability and validity tests of this have shown to be excellent.
- This measure would be useful in program evaluation.

Weaknesses:
- Information from the questions is insufficient to completely assess individual level of food insecurity and hunger.
- The questionnaire assessed households only at one point in time whereas food insecurity and hunger is reported over time (Frangillo, 1997).

2. Radimer/Cornell Measures of Hunger and Food Insecurity

Radimer and colleagues at Cornell University conducted in-depth interviews with 32 women and children in rural and urban areas of central New York State to measure food insecurity in households with children (Radimer, 1992).
Based on these interviews, they developed a questionnaire which includes 12 items having 3 subscales, each containing 4 items. The subscales covered household food insecurity, women's food insecurity and hunger and child hunger (Table 4) (Campbell, 1991). A 13th question to measure quality of household food supplies was also added (Keenan, 2001).

This measure classifies subjects into mutually exclusive groups representing increasing degrees of food insufficiency (at the household, adult and child level). Food insecurity is evaluated on the basis of the following criteria (Kendall, 1995):

- Quantity of food
- Quality of food
- Certainty of getting food
- Food acceptability

Table 4: Radimer's Food Insecurity Scales (Source: Campbell, 1991)

<table>
<thead>
<tr>
<th>Household hunger</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you worry whether your food will run out before you get money to buy more?</td>
<td></td>
</tr>
<tr>
<td>2. The food that I bought just didn't last, and I didn't have money to get more.</td>
<td></td>
</tr>
<tr>
<td>3. I ran out of foods that I needed to put together a meal and I didn't have money to get more food.</td>
<td></td>
</tr>
<tr>
<td>4. I worry about where the next day's food is going to come from.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Women's hunger</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can't afford to eat the way I should.</td>
<td></td>
</tr>
<tr>
<td>2. Can you afford to eat properly?</td>
<td></td>
</tr>
<tr>
<td>3. How often are you hungry, but you don't eat because you can't afford enough food?</td>
<td></td>
</tr>
<tr>
<td>4. Do you eat less than you think you should because you don't have enough money for food?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children's hunger</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I cannot give my child(ren) a balanced meal because I can't afford that.</td>
<td></td>
</tr>
<tr>
<td>2. I cannot afford to feed my child(ren) the way I think I should.</td>
<td></td>
</tr>
<tr>
<td>3. My child(ren) is/are not eating enough because I just can't afford enough food.</td>
<td></td>
</tr>
<tr>
<td>4. I know my child(ren) is/are hungry sometimes, but I just can't afford more food.</td>
<td></td>
</tr>
</tbody>
</table>

1Response categories: for questions: never, sometimes, often; for statements: not true, sometimes true, often true. Hunger criterion is any response other than “never” or “not true.”

Source: Radimer et al. (1990).
How useful and effective is it?

Strengths:

- The reliability coefficients were high.
- The items have been widely used in face-to-face interviews and found to be valid and reliable for identifying group of households and individual households with food insecurity.
- This measure has been determined to have good specificity and excellent sensitivity. (Frongillo, 1999).

Weakness:

- This scale has been validated to screen for hunger and food insecurity among rural white households (Kendall, 1995). Whether it can be as effectively applied to other limited-income groups as a whole is not known. A study among limited-income Hispanics in Hartford, CT using this scale was done. The study found high prevalence of hunger and food insecurity among limited-income Hispanic families, which was significantly associated with socio-economic and food assistance indicators. However, additional analysis and research for non-white populations using this scale would be necessary to confirm its validity and effectiveness (Himmelgreen, 2000).

3. **USDA Household Food Security Scale**

   The USDA’s food security scale, also known as the food security core module (FSCM), is the first official and most widely used household measure of food insecurity and hunger in the U.S. It provides a consistent basis for comparing food insecurity and hunger prevalence over time and across different populations. FSCM consists of an 18 item survey instrument constructed as a scale measure. The items ask about the household's experiences of increasingly severe circumstances of food insufficiency and the behaviors undertaken in response to them during the 12-month period preceding the survey (Table 5) (USDA/ERS, 2002). Responses to the questions are combined into a scale using appropriate non-linear statistical methods. Item response scaling procedures with interval scale points are used to develop a scale of the severity of food problems in a household. The food security scale therefore provides a continuous graded measure of the severity levels of food deprivation in U.S. households. It assigns each household a scale value ranging from 0 to 10, “0” indicating no evidence of food insecurity and “10” showing most severe degree of food insufficiency problems. The questions in the scale reflect the different stages households go through as food insecurity worsens.
Table 5: Food Security Core Module (Source: Andrews, 2001b)

<table>
<thead>
<tr>
<th>Core Food Security Module Questions and Answer Categories</th>
<th>True in last 12 months?</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I/We) worried whether (my/our) food would run out before (I/we) got money to buy more.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>The food that (I/we) bought just didn’t last, and (I/we) didn’t have money to get more.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>(I/we) couldn’t afford to eat balanced meals.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>(I/we) relied on only a few kinds of low-cost food for (my/our child/children) because (I was/we were) running out of money to buy food.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>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?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>(I/we) couldn’t feed (my/our child/children) a balanced meal because (I/we) couldn’t afford that.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>Did you ever eat less than you felt you should because there wasn’t enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>How often did (you/you or other adults in your household) cut the size of your meals or skip meals because there wasn’t enough money for food?</td>
<td>Only 1-2 months</td>
</tr>
<tr>
<td></td>
<td>Some but not every</td>
</tr>
<tr>
<td></td>
<td>Almost every</td>
</tr>
<tr>
<td>(My/our child was/children were) not eating enough because (I/we) couldn’t afford enough food.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>Were you ever hungry but didn’t eat because you couldn’t afford enough food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Did you lose weight because you didn’t have enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Did you ever cut the size of (your child’s/any of the children’s) meals because there wasn’t enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Did (you/you or other adults in your household) ever not eat for a whole day because there wasn’t enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>(Was your child/were the children) ever hungry, but you just couldn’t afford more food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>How often did (you/you or other adults in your household) not eat for a whole day because there wasn’t enough money for food?</td>
<td>Only 1-2 months</td>
</tr>
<tr>
<td></td>
<td>Some but not every</td>
</tr>
<tr>
<td></td>
<td>Almost every</td>
</tr>
<tr>
<td>Did (your child/children) ever skip a meal because there wasn’t enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>How often did (your child/any of the children) skip a meal because there wasn’t enough money for food?</td>
<td>Only 1-2 months</td>
</tr>
<tr>
<td></td>
<td>Some but not every</td>
</tr>
<tr>
<td></td>
<td>Almost every</td>
</tr>
<tr>
<td>Did (your child/any of the children) ever not eat for a whole day because there wasn’t enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Note: Answer categories counted as affirmative are shaded in grey. Items are ordered in terms of severity levels.

For further information on scale scoring and categorization, access online at

Using the scoring procedure, households can be classified into one of four security status categories (Figure 1) (Hamilton, 1997):

- **Food secure** – household showing no or minimal evidence of food insecurity.
- **Food insecure without hunger** – household showing concern about food sufficiency and attempting to manage food situation by making adjustments to the quality of the diet with no or limited reductions in the quantity of food.
- **Food insecure with hunger** – reduced food intake for adults in the household to the extent that adults repeatedly experience the painful sensation of hunger.

For some purposes the final category is further divided into:

- **Food insecure with severe hunger** – reduced child food intake in the households to the extent that children experience the painful sensation of hunger.

Figure 1: Continuous and Categorical Measures of Household Food Security
(Source: Hamilton, 1997)
How useful and effective is it?

Strengths:

- The food security scale is a very comprehensive instrument.
- It provides a greater precision and has been shown to have good reliability ranging from 0.86 to 0.93 (Hamilton, 1997).
- This scale correlates significantly with the poverty–income ratio, weekly food expenditures, and the USDA food sufficiency question in the expected ways, indicating validity (Keenan, 2001).
- It is a low-cost solution to the need for direct monitoring of food insecurity and hunger (Nord, 2001a). It is useful for monitoring population trends in food security status since it tracks the prevalence of food security at several well-defined levels consistent over time and across population sub-groups.
- Recent research has shown this measure to be very stable over time and robust across diverse population groups (Derrickson, 2000).
- A rich array of national background data is becoming available against which local studies can be benchmarked (Carlson, 1999; Bickel 2000).
- The module has been successfully administered both by telephone and indirect individual interviews using computer-assisted technology.

Weaknesses:

- A frequent query raised about the eighteen-item core module is that it is very long and burdensome to administer. However, it is designed to reduce survey burden by two successive stages of screening within the eighteen items. All households are not asked all the eighteen questions. Majority of households are asked just three to five questions (depending on whether they have children) and then screened. The second level of screening reduces further the number of households who need to be asked all eighteen items.
- Limited sensitivity: some food insecure individuals are not correctly identified.
- Length of recall time (i.e. 12 month period): A year is a long time and episodes of hunger may have occurred during shorter time periods (e.g. a month) while a household’s income was low, even though the household’s annual income was not. Also people recall things better over a shorter period of time than a longer duration.
- The FS Scale is a household scale rather than an individual scale: questions pertain to everybody, the adults as a group, or the children as a group.
The scale provides little information regarding the frequency and duration of episodes of food insecurity and of food deprivation which results in hunger.

3a Standard 6 item subset of FSCM

For research efforts with time and/or financial constraints that make using the full eighteen-item scale difficult, an abbreviated six-item scale has been developed by researchers at the National Center for Health Statistics (Table 6) (Nord, 1999). The six items are a subset of the full eighteen-item version and closely approximate the three main categories of the eighteen-item food security measure:

- Food secure
- Food insecure without hunger
- Food insecure with hunger

Table 6:  (Source: Nord, 1999)

<table>
<thead>
<tr>
<th>Short Form of the 12-month Food Security Scale - Questionnaire</th>
<th>True in last 12 months?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>2 (I/we) couldn't afford to eat balanced meals.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>3 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?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td><strong>(Ask only if # 3 = Yes)</strong></td>
<td></td>
</tr>
<tr>
<td>4 How often did (you/you or other adults in your household) cut the size of your meals or skip meals because there wasn't enough money for food?</td>
<td>Almost every</td>
</tr>
<tr>
<td></td>
<td>Some but not every</td>
</tr>
<tr>
<td></td>
<td>Only 1-2 months</td>
</tr>
<tr>
<td>5 Did you ever eat less than you felt you should because there wasn't enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>6 Were you ever hungry but didn't eat because you couldn't afford enough food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Note: Answer categories counted as affirmative are shaded in grey. Items are ordered in terms of severity levels.

For further details on this 6 point scale scoring and categorization, access online at


How useful and effective is it?

Strengths:

- The short form 6-item scale is useful for quick application needs and in areas where computer-assisted interviewing capability is absent.
The six-item scale is relatively accurate and was found to be unbiased in a national sample. It classified 97.2% of households correctly and underestimated the prevalence of food insecurity and hunger by 0.3 percentage points (Blumberg, 1999). It may be less accurate and more unbiased in areas where there is different prevalence of food insecurity and demographic composition.

This short form is a brief but potentially useful tool for national surveys and some state/local applications.

Less respondent burden – it can identify households with no food insecurity, with three questions.

Prevalence estimates of food insecurity and hunger are only minimally biased.

Weaknesses:

- The short form does not distinguish between the two most severe categories (with hunger and with severe hunger) of food insecurity.
- Does not address hunger among children. This scale performs better in households without children and does not reach the very severe range of food insecurity where children's hunger occurs.
- Less precise and somewhat less reliable than eighteen-item measure.
- May not be appropriate for use in populations with a high prevalence of physical disabilities or the elderly (Blumberg, 1999).

3b 30 day Food Security Scale

Since 1995, data collected on conditions related to food security have examined a 12-month period. While the twelve-month scale is the primary monitoring tool, there is a subset of questions on conditions during the last thirty days. Work on developing a thirty day food security scale has continued, resulting in a revised and simpler scale which is expected to complement and not replace the twelve-month scale. Both the scales represent identical arrays of conditions and behaviors, except that they refer to different periods of time. Prevalence statistics based on this thirty day scale could provide additional perspective on the prevalence and persistence of food insecurity and hunger (Nord 2002c).

How useful and effective is it?

Strengths:

- This scale is suitable for routine monitoring and research purposes within the range of food insecurity and hunger that it measures.
This measure is expected to show a larger seasonal effect since it would be sensitive to actual seasonal prevalence rates (Nord 2002c).

Weaknesses:

- The 12-month food security scale measures food insecurity across a wide range, from mild to severe, but the 30-day scale does not measure mild food insecurity at the less severe end of the range.
- It is slightly less reliable than the 12-month scale especially for households with children, as a result of it being based on a smaller number of items in the scale (Hamilton, 1997).

3c Children’s Food Security Scale

The capacity to accurately measure the extent to which children are affected by resource-constrained food storage is an essential tool for monitoring food insecurity and hunger at the most severe levels in U.S. households and for assessing programs designed to prevent or ameliorate these conditions (Nord, 2002d). Children begin to experience hunger only when household deprivation is at very severe levels. Typically adults cut back on their own diets first before limiting their children’s intake and outright hunger is usually experienced by children only when the adults can't cut their own diets further. While this is the general scenario, there are evidences of childhood hunger reported in families with moderate hunger prevalence also.

To obtain valid estimates of childhood hunger, USDA has developed a children's food security scale, based on five-year analysis of CPS Food Security Survey data (Table 7) (Nord, 2002d). The purpose of this scale is to measure the food security status of children and, specifically, to identify households in which one or more children have been hungry at times during the year because there was not enough money for food in the household. The children's food security scale is calculated from eight survey items that ask specifically about food-related experiences and conditions of children in the household. While this is a sub-set of the eighteen survey items on which household food security scale is based, the eight child-referenced items have been scaled in the order of severity and an appropriate threshold has been set. Households that answered affirmatively to five or more out of eight are classified as having hunger among children.

How useful and effective is it?

Strengths:

- The children's food security scale is more reliable than the household food security scale in identifying households with hunger among children.
Table 7: (Source: Nord, 2002d)

<table>
<thead>
<tr>
<th>Children's Food Security Scale</th>
<th>True in last 12 months?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (I/we) relied on only a few kinds of low-cost food for (my/our child/children) because (I was/we were) running out of money to buy food.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>2 (I/we) couldn't feed (my/our child/children) a balanced meal because (I/we) couldn't afford enough food.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>3 (My/our child was/children were) not eating enough because (I/we) couldn't afford enough food.</td>
<td>Often true</td>
</tr>
<tr>
<td></td>
<td>Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Never true</td>
</tr>
<tr>
<td>4 Did you ever cut the size of (your child's/any of the children's) meals because there wasn't enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>5 Did (your child/children) ever skip a meal because there wasn’t enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>6 How often did (your child/children) skip meals (3 or more months) because there wasn’t enough money for food?</td>
<td>Almost every month</td>
</tr>
<tr>
<td></td>
<td>Some but not every</td>
</tr>
<tr>
<td></td>
<td>Only 1-2 months</td>
</tr>
<tr>
<td>7 (Was your child/ were your children) ever hungry, but you just couldn’t afford more food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>8 Did (your child/children) ever not eat for a whole day because there wasn’t enough money for food?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Note: Answer categories counted as affirmative are shaded in grey. Items are ordered in terms of severity levels.

For further details on the children’s food security scale, access online at:

- This scale has been statistically assessed and found to be adequate, reasonably reliable, and quite stable across years.

Weaknesses:
- Although this eight-item scale is child-specific, it is still a household level scale and hence it only identifies households that have childhood hunger.
- In households with more than one child and with children of varying age groups, this scale does not clearly identify whether all children experienced hunger or what levels of hunger were experienced by the children of differing age groups (Nord 2002d).

3d Further Uses of the USDA Household Food Security Scale

To help make the core module accessible and easy to use USDA has developed a Guide to Measuring Household Food Security (revised 2000) that provides detailed information on how to implement the household
food security scale (Bickel, 2000). Use of this guide facilitates the inclusion of a standard measure into regional, state, or local level surveys of food security. Local findings can be compared to national estimates (Guthrie, 2002).

Some of the salient features include:

- Food security and hunger measurement concepts
- Theoretical and statistical underpinnings of the methodology
- Wording for the eighteen questions in the survey module
- Screening specifications to minimize respondent burden without biasing data
- Specifications for coding and scoring items
- Guidance for using the standard 6-item short form of the food security module


2.6 Community Level Measures:

Measuring community food security would provide baseline data against which to assess the impact of food and agricultural policies and practices on public health and the environment in general (Hamm, 2003). Although research tools and methods that measure food security status at the individual and household level have been developed and reviewed, no standardized, broadly applicable, and simple measurement tools exist at the community level. Three instruments have been identified for community level food security measurement. They are as follows:

1. Second Harvest National Food Bank Network Agency Survey (NFBNA)

The Second Harvest research study (Kim, 2001) was designed to provide a comprehensive profile of the extent and nature of hunger and food insecurity as experienced by people who access America’s Second Harvest national network of charitable feeding agencies. Two extensive survey instruments were designed – one for agencies that distribute food, and one for the emergency food clients. The mail-in agency survey consisted of a wide range of questions regarding level of services offered by the agencies, agency resources, perceptions of community hunger awareness etc. The client survey was designed to include structured personal interviews to gather data regarding who is receiving emergency food assistance and why, explore situations surrounding their need to use these services, and whether the problem of hunger is changing.
2. **Survey used to collect data for the Task Force on Hunger and Homelessness under the U.S. Conference of Mayors**

   In October 1982, the U.S. Conference of Mayors and the U.S. Conference of City and Human Services Officials brought the shortage of emergency services – food, shelter, medical care, income assistance, and energy assistance – to national attention through a 55-city survey. The survey showed that the demand for emergency services had increased in cities across the nation, and on average only 43% of the demand was being met. Since that time the conference has done numerous reports on hunger, homelessness, and poverty in cities based on responses to the survey. The reports provide information on the current status of hunger, homelessness, and the conditions which have affected them, how cities are responding to them and what national responses are required.

   To respond to the survey, city officials consult with and collect data from community-based providers and government agencies. This data is then compiled and reviewed by the individual or agency designated to be the Conference of Mayor’s contact for the survey, before being submitted to the Conference of Mayors. The survey can be accessed online at [http://www.usmayors.org/uscm/hungersurvey/2000/hunger2000.pdf](http://www.usmayors.org/uscm/hungersurvey/2000/hunger2000.pdf)

   Neither of the above-mentioned surveys has undergone survey development testing and further work is needed in this area (Keenan 2001).

3. **Cooperative Extension Hunger Surveys**

   University of California Cooperative Extension Advisors base their Food, Nutrition and Consumer Sciences program priorities and implementation strategies on community assessments. For example, in 1984, Linda Garcia pioneered the effort to describe characteristics and needs of people who stood in line for free food in Sonoma County. The goal of guiding other counties in systematically gathering and analyzing data from people who use emergency food was taken over and extended by the State Expanded Food and Nutrition Education Program (EFNEP) office.

   Between 1986 and 1990, EFNEP surveys were developed, tested and used in 20 counties to collect information from emergency food providers and their clients. The survey of providers, including food pantry and soup kitchen staff described the services provided, adequacy of food supplies and facilities and needs for food and nutrition information. The client survey included questions on demographic, housing and cooking facilities,
family income and expenses, employment and use of public and private assistance programs. The client survey also asked if children or adults in the household ever went to bed hungry. Recipients' interest and need for food and nutrition education programs was also assessed. In some counties the surveys were done by a group of volunteers or an organized, community-based “hunger task force.” In others, the surveys were done by UCCE staff. In one county, the survey was conducted before and after “welfare reform” to measure trends.

Results were used in a variety of ways. In every county, local data was used to guide EFNEP and related Cooperative Extension programming. County officials and policy makers were briefed on the report, in some cases, opening eyes to a “new” problem. Data from the reports were used for local grant requests to initiate or expand emergency food services. County reports provided the basis for statewide reports and policy papers, presentations, articles in journals, conferences, and national USDA publications. One county’s report appeared in the U.S. Congressional Record. Reports supported local hunger groups in taking up advocacy work for Food Stamp Outreach, Child Nutrition programs and food bank program expansion.
Prevalence and Indicators

Understanding the causes and consequences of food insecurity is critical for assessing the threat that it poses to the health and well-being of a population and for improving policies and programs to reduce its prevalence and severity.

3.1 How Big is the Problem?

Hunger, a consequence of severe food insecurity, is the uneasy or painful sensation caused by a lack of food. It is the recurrent and involuntary lack of access to food and may produce malnutrition over time (LSRO, 1990). Hunger is not a new social problem but it is a problem that has elicited different public policy and program responses at different times, depending upon how it was defined. In the 1930’s, when people went hungry while food was plentiful the response to this “paradox of want amid plenty” in the U.S. was a government program to purchase farm surpluses and redistribute them to the poor. During the late 1960’s, hunger was considered the result of inadequate federal food assistance programs and prompted changes to the U.S. Food Stamp program. In the 1980’s, the need for food was reviewed as an emergency situation with strong response from local and voluntary “emergency food providers” (Power, 1998).

The prevalence of food insecurity and hunger in the United States within the context of the nation’s economic prosperity and technological advancements is disturbing. The general food security objective adopted by the Healthy People 2010 is to “increase food security among U.S. households and in doing so reduce hunger.” The specific objective is to reduce the prevalence of food insecurity by half, by 2010 (Nord, 2002b). To achieve the targeted reductions in food insecurity and hunger by 2010, renewed economic growth will be required. In addition, particular attention will need to be paid to policies and programs that affect employment and earning opportunities of households that are most vulnerable to food insecurity.

Based on the first national scale food insecurity survey, conducted by the United States Department of Agriculture (USDA) in April 1995, an estimated 12% of U.S. households (11.8 million households) were food insecure, including 4% (4.2 million) classified as food insecure with hunger. Nearly 20% of the hungry households (817,000 of the 4.2 million) had one or more members who experienced severe hunger either through reduced food intake among children (332,000 households) or a prolonged lack of food among adults in households with no children (Nord, 2002b; Hamilton, 1997). However, the prevalence of food insecurity and hunger declined from 1995 to 1999 and increased somewhat from 1999 to 2001 (Fig 2). Food insecurity
declined from 11.8% in 1995 to 10.1% in 1999. Over the same four year period, the hunger rate fell from 4.15 - 2.97% (Nord, 2002a; Andrews, 2001a). The strong economic growth of the late 1990's can account for the reduction in food insecurity from 1995 to 1999. In addition, policy and program initiatives in the following eight areas contributed to the decline in food insecurity (Andrews, 2001a):

1) economic security
2) food access
3) awareness of hunger and food insecurity
4) nutrition and food security education
5) sustainable food systems and environment
6) food and water safety
7) monitoring food security and nutritional status, and
8) research and evaluation

Figure 2: (Source: Nord, 2002a)

Although the improvement in food security from 1995 to 1999 was encouraging, it was short-lived. The prevalence of food insecurity rose from 10.1% in 1999 to 10.7% in 2001, and the prevalence of food insecurity with hunger rose from 3.0% to 3.3% (Table 8) (Nord, 2002a). California’s poverty rate remains above the national average (Poppendieck, 2001). This is a state that has the largest agricultural economy in the U.S., yet there are an increasing number of people suffering from hunger or food insecurity. In 2001, 28.3% low-income
adults in California were food insecure as were 22.7% or 1.05 million adults with incomes between 100% and 199% of the federal poverty line and 36.2% or 1.2 million adults with incomes below 100% of the federal poverty line (Harrison, 2002).

Between 1999 and 2001, the incidence of food insecurity increased for nearly all household types. The increases were the largest in female-headed households with children, Hispanic households, and households outside metropolitan areas. Food insecurity increased for households with incomes between 130% – 185% of the poverty line, was unchanged for households with income below 130% of the poverty line, but increased for households above 185% of the poverty line (Fig 3) (Nord, 2002a). Appendix B provides detailed information on the development of the current poverty line or thresholds.

Table 8: Food Insecurity and Hunger in the United States, 2001 (Source: Nord, 2002a)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>000’s</td>
</tr>
<tr>
<td>Number of households</td>
<td>107,824</td>
</tr>
<tr>
<td>Food insecure</td>
<td>11,521</td>
</tr>
<tr>
<td>Without hunger</td>
<td>8,010</td>
</tr>
<tr>
<td>With hunger</td>
<td>3,511</td>
</tr>
<tr>
<td>Individuals in households</td>
<td>276,661</td>
</tr>
<tr>
<td>Food insecure</td>
<td>33,642</td>
</tr>
<tr>
<td>Without hunger</td>
<td>24,628</td>
</tr>
<tr>
<td>With hunger</td>
<td>9,014</td>
</tr>
<tr>
<td>Children in households</td>
<td>72,321</td>
</tr>
<tr>
<td>Food insecure</td>
<td>12,701</td>
</tr>
<tr>
<td>Without hunger</td>
<td>12,234</td>
</tr>
<tr>
<td>With hunger</td>
<td>467</td>
</tr>
</tbody>
</table>

3.2 Who is at Risk of Being Food Insecure?

According to the results of the Census Bureau survey, those at greatest risk of being hungry or on the edge of hunger (i.e. food insecure) live in households that are: headed by a single woman; households with children; Hispanic and African Americans; and with incomes below the poverty line (FRAC, 2002).

3.3 Factors Associated with Food Insecurity:

The underlying cause of food insecurity is the gap between income and other resources that sustain people and their needs. This gap is traditionally called “poverty”. There are 2 sides to the equation of poverty (Poppendieck, 2001):
1) The income side and,

2) The cost side

Figure 3: Prevalence of Food Insecurity, 1999 and 2001 (Source: Nord, 2002a)

While poverty is the main cause of food insecurity, affordability and accessibility of food are also critical elements. Affordability and accessibility of food in the U.S. are affected more by proximal determinants such as income inequalities and supermarket accessibility than by macroeconomic and agricultural phenomena. Factors like purchasing power, consumer education, availability of healthy foods, and the proximity of reliable and efficient public transportation play a large role in household food security (Weinstein, 2000; Pothukuchi, 1999). The alleviation of poverty would be the most effective means of eliminating food insecurity and hunger. But until such a goal is reached, it is useful to identify other factors which contribute to food insecurity so that the
vulnerability to food insecurity when poverty persists can be reduced. Furthermore, by identifying people who are most at risk, efforts can be targeted towards these individuals.

Factors that aggravate food insecurity are:

- **Income and Employment**

  *Income* is an important determinant of food security. It is a critical determinant of access to food in a society. According to the 1989-1991 Continuing Survey of Food Intake by Individuals (CSFII) to determine the socio-economic predictors of food insufficiency in the United States, income was found to be one of the strongest predictors of food insufficiency (Rose, 1998a). In addition to the above survey, evidence based on other surveys in different years such as the Current Population Survey (CPS), NHANES III, and the Survey of Income and Program Participation (SIPP) all indicate that there is a clear and consistent relationship between food insecurity with hunger and income (Rose, 1999; 1998a; Hamilton 1997). Figure 4 illustrates the income of food insecure households in 2000. In 2001, food insecurity was six times more prevalent, and hunger seven times more prevalent with annual income below 185% of the poverty line as in households with income above this range (Nord, 2002a).

  *Employment* is also an important predictor of food security because it generates income which provides the purchasing power to buy food. Often, food insecure individuals are unemployed. In California, as elsewhere in the nation, unemployment has risen sharply. It reached 5.4% in September 2001, up from 4.6% in January 2001 (Poppendieck, 2001) and remains at 5.4% in August, 2004.

  Figure 4: (Source: Nord, 2002b)

<table>
<thead>
<tr>
<th>Income of Food Insecure Households, 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>higher than 185% of poverty line</td>
</tr>
<tr>
<td>29%</td>
</tr>
<tr>
<td>130 to 185% of poverty line</td>
</tr>
<tr>
<td>14%</td>
</tr>
<tr>
<td>below poverty line</td>
</tr>
<tr>
<td>44%</td>
</tr>
<tr>
<td>100 to 130% of poverty line</td>
</tr>
<tr>
<td>13%</td>
</tr>
<tr>
<td>100 to 130% of poverty line</td>
</tr>
<tr>
<td>14%</td>
</tr>
</tbody>
</table>

• **Economic Transition**

   Literature suggests that people who are especially vulnerable to food insecurity are those undergoing an economic transition such as reduction or loss of a job, loss of food stamp benefits, increase in household size, divorce, health care expenses, higher utility bills, etc. (Gundersen, 2001; Rose, 1999).

• **Education**

   Low literacy is another determinant of food insecurity. Lack of education limits employment opportunities and thereby the capacity to earn wages to buy food. Moreover, low level of literacy also deprives the people of adequate knowledge about healthy eating such as specific types of food that promote good health and nutrition. In a study conducted by Rose et al (1998a) food insufficiency was found to be lower for households headed by a high school graduate than for those headed by a non-high school graduate. For the last 30 years Cooperative Extension’s EFNEP (Expanded Food and Nutrition Education Program) and FSNEP (Food Stamp Nutrition Education Program) have been successful only to a limited extent in providing education to vulnerable populations to enable them to deal with limited resources.

• **Transportation**

   Many limited income households may not have access to reliable modes of transportation and thus may be limited to using stores that they can reach only by foot or public transportation. The problem of limited automobile access for the elderly is even more severe. This situation is compounded by the limitations in shopping opportunities in limited income neighborhoods (Cotterill, 1995). Residents without vehicles are severely limited in their ability to purchase fresh produce and other perishable but nutritious foods from grocery stores. These residents often have to depend on unreliable means such as public transit, taxis, or friends to travel to grocery stores which limit the frequency of their trips. Various other factors hamper food shopping abilities even further. These include the presence of young children, inability to carry large amounts of groceries when commuting on buses and transferring between bus lines, limited availability and high cost of taxis, safety issues confronted by senior citizens using public transit, etc. (Bolen, 2003).

• **Access to Adequate, Balanced Food Supply through Normal Channels (economic exchange, including food vouchers and stamps, not charity)**

   Ensuring access to food involves existence of food stores and food assistance programs at a convenient distance and the ability to get to these places. If a supermarket or food assistance program is not
within reasonable walking distance, it is “out of reach” to the limited income households. It has been observed that major retailers, concerned about business and limited consumer purchasing power, do not offer business in limited income areas and even if they do, charge higher prices and offer lower quality merchandise. This has given rise to the emergence of the term “Food Deserts”, characterized as those areas of inner cities where cheap nutritious food is virtually unobtainable. Limited access to food retailers also poses a significant obstacle to food stamp recipients in being able to use the program benefits efficiently and effectively to improve their diets (Ohls, 1999). Because of decline of supermarkets in limited income areas, residents are forced to depend on small stores with limited selections of food and higher prices. The benefit of having a supermarket within accessible distance is:

- Prices are lower. A 1997 study by USDA’s Economic Research Service found that supermarket prices were about 10% lower nationwide, compared with grocery stores, convenience stores etc.
- Supermarkets can lower total food costs by offering larger package sizes or their own store brands in food items that are more economical (Kantor, 2001).
- They carry a wide range of items required by a household.
- Food stamps can be redeemed.
- Travel time and costs are also reduced when the supermarket is close by.

• **Time**

Food shopping takes considerable time, a factor which is often ignored. This is particularly important for women with young children, for whom the “juggling” of competing demands over food, time and money is often a daily issue. Also, if money that is in short supply is spent on transportation, it will cut into the budget to buy food. Moreover, whenever children are involved, the additional time required for car-less grocery shopping could be a serious barrier (Bolen, 2003).
4.1 Purpose:

Food security is affected by a wide range of factors that operate on many different types of sub-systems. Improvements in many different areas through suitable interventions can ultimately improve the availability, affordability and sustainable access to food. Food security interventions using an anti-hunger approach can be divided into those that help ‘prevent’ and those that help ‘treat’ or help households ‘better manage’ the risk of food insecurity.

Since the 1960’s, the United States has taken a variety of approaches to providing a food safety net for the poorest of its population. U.S. nutrition programs have evolved over the past 30 to 50 years in response to identified problems of poor nutrition and food insecurity. Currently, two main types of food assistance exist. **Public Assistance** is entirely government funded and is the basis of the U.S.’s approach to dealing with food insecurity. This encompasses a whole range of food assistance programs, the principal one being the Food Stamp Program. Because of the inadequacy of this form of assistance, private assistance is needed. **Private Assistance** serves the function of filling the gaps that public assistance has left unfulfilled. It can be supplemented by government funding but is privately initiated and receives substantial funding from private donors. This form of assistance usually takes the form of food pantries, soup kitchens and food banks (Daponte, 2001).

4.2 Public Food Assistance Programs

Historically, through the work of advocates, U.S. food assistance programs focused on the purchase and distribution of surplus agricultural commodities to limited-income households and to school lunch programs. The federal nutrition assistance safety net represents the first line of defense in boosting the purchasing power and improving the nutritional status of limited-income households. There are several food assistance programs under this net, to identify and reach out to all the food insecure and needy sections of the population. Over time, the design of food programs has changed from assistance being distributed directly as food to assistance of
other forms designed to help limited-income households meet the costs of obtaining food, enrich the diet and gain access to health care.

The five core programs include the Food Stamp Program, the Special Supplemental Program for Women, Infants and Children (WIC), the National School Lunch Program, the School Breakfast Program, and the Child and Adult Care Food Program.

1. **Food Stamp Program (FSP)**

   Food stamps, a federal entitlement program for people who need assistance in meeting basic necessities, are the cornerstone of USDA’s domestic food and nutrition assistance programs. It originated as a federal assistance program in 1964 designed to dispose of surplus agricultural commodities to stabilize farm prices. While assistance to farmers remains a part of the program’s objective, the current focus is on providing limited-income households with coupons or electronic benefits that are used like cash at most grocery stores (Cohen, 1999). The basic premise underlying the Food Stamp Program is that the use of food stamps will increase family food expenditures, which will in turn improve food consumption and nutrient intake. In Fiscal Year 2001, FSP served 17.9 million people in an average month at a total cost of $17.8 billion, of which $15.5 billion were for food stamp benefits (Rosso, 2003). Fiscal year 2001 marked the first increase in the number of food stamp participants in 7 years. During fiscal year 2002, the average number of people participating in the program per month totaled 19.1 million (10% more than in year 2001) at a total cost of $20.6 billion (15% more than fiscal 2001) (USDA/ERS, 2003). The momentum to improve the program’s reach to eligible families has continued to build in 2001 and 2002.

**Who is eligible?**

The FSP is designed to provide assistance to hungry people regardless of their age, gender, marital or family status (Arnold, 2001). It is intended as a supplemental program and does not provide the entire food budget for eligible individuals. Being a federal entitlement program, the basic eligibility criteria of the FSP remains the same in every state. Eligibility is determined primarily by income, asset limit, and non-financial criteria (such as restrictions on the participation of students, strikers, and people who are institutionalized). To qualify most households must have a pre-tax income below 130% of the federal poverty line for their family size and assets below $2000 (Winicki, 2002). In 2000, the percentage of eligible persons participating in the program was 57-60% (FRAC, 2003).
What are the benefits?

FSP is designed to provide benefits to anyone who meets the program's eligibility, application, and reporting requirements. The benefits remain the same in every state and are awarded based on the size of the household and income level. Food stamp benefits can be used only for the purchase of food or seeds and plants that produce food. Benefits are issued mainly in the form of paper coupons that can be redeemed at authorized retailers such as grocery stores and some farmers' markets. However, the 1996 welfare reform law mandated that all states start issuing benefits in the form of an electronic benefit transfer (EBT) (which is a cash transfer to an account created specifically for FSP benefits) by 2002. Participants receive a “debit card” similar to a bank card that can be used to purchase food at the authorized retailers.

2. Child Nutrition Programs

- National School Lunch Program (NSLP) and School Breakfast Program (SBP)

The donation of surplus commodities to schools, which began on a limited basis in 1932, was part of Federal relief efforts to relieve farmers and promote agriculture. Schools essentially served as outlets for farm commodities purchased by the USDA to lessen price-depressing surpluses. When Congress approved the National School Lunch Act in 1946, it intended to do more than provide an outlet for the disposal of surplus agricultural commodities.

The National School Lunch Program (NLSP) is an entitlement program open to schools and residential child-care institutions. It is the largest of the federal child nutrition programs and provides nutritious low-cost or free lunches to school-children. Lunch is available to all children at participating schools, and the meals must meet specific nutritional requirements in order to qualify for federal funds. The total cost of the program over fiscal year 2002 was $6.8 billion (USDA/ERS, 2003).

The School Breakfast Program as a whole is a more recent initiative that began as a pilot project in 1966, and was made permanent in 1975. It provides federal funds to schools and child care institutions to offer nutritious meals to students and operates in the same manner as the NLSP. Spending for the program totaled $1.6 billion for fiscal year 2002 (USDA/ERS, 2003).

Who is eligible?

Both NSLP and SBP target school-age children by providing free or reduced-priced meals to low-income children at participating public and private schools. Household income is used to determine whether a child will pay a substantial part of the cost for the lunch or will receive a reduced-price or free meal. To receive
a reduced-price meal, household income must be between 130 - 185% of the federal poverty level. For free
meals, household income must be at or below 130% of poverty. Children in food stamp households are
automatically eligible for free meals. Children from families with income above 185% of the poverty level pay full
price, though their meals are still federally subsidized. Thus, unlike the other food assistance programs,
benefits from both NSLP and SBP are available to all school children regardless of family income. A total of
$4.7 billion lunches and $1.4 billion breakfasts were served during fiscal year 2002. Of the total lunches served,
almost half were free and 9% were reduced-price. Of the total breakfasts served, almost three-quarters were
provided free and 9% were reduced-price (USDA/ERS, 2003).

- **Summer Food Service Program (SFSP)**

  The Summer Food Service Program was created in 1968 as a part of a larger pilot program and
  became an independent program in 1975. It is an entitlement program designed to provide funds for eligible
  sponsoring organizations to serve nutritious meals and snacks to low-income children when school is not in
  session. Most SFSP sites can be reimbursed for only two meals or snacks served per day. The total cost of the
  program over fiscal year 2001 was $272 million. Almost all sites served lunch and about half served breakfast
  in 2001 (Gordon, 2003).

**Who is eligible?**

**Sponsor eligibility**

Eligible sponsors of the Summer Food Program must be located in areas where the majority of children
are low-income and meals must meet specific nutritional requirements. Sponsoring sites include school
districts, local government agencies, summer camps, and other private non-profit organizations such as Boys
and Girls Clubs, YMCA, religious institutions, social service agencies, and other community groups (Gordon,
2003).

**Children’s eligibility**

Children through age 18 are eligible to receive SFSP meals. Individuals older than 18 may receive
meals if they have physical or mental disabilities and if they participate in special school programs for students
with disabilities (Gordon, 2003).

All meals are free to participating children regardless of household income. During fiscal year 2001,
more than 4,000 local agencies (sponsors) provided about 130 million meals at over 35,000 feeding sites.
Child and Adult Care Food Program (CACFP)

CACFP is a federal program that was founded in 1968 and permanently authorized in 1978. It provides federal funds for healthy meals and snacks to licensed public and non-profit child-care centers and family day-care homes for preschool children, after-school programs for school-children, and adult day care centers serving chronically impaired adults or people over the age of 60. It plays a vital role in improving the quality of day care and making it more affordable for many low-income families. Expenditures for the program totaled almost $1.9 billion in fiscal 2002, an increase of about 7% from the previous year (USDA/ERS, 2003).

Who is eligible?

Sponsor Eligibility

To be eligible for participation in CACFP, a sponsor must be a licensed or approved child care provider or a public or nonprofit private school which provides organized child care programs for school children during off-school hours. CACFP is an entitlement program and the providers of care are reimbursed for each type of qualifying meal (breakfast, lunch/supper, or snack) they serve. Participating facilities are required to provide meals that meet the nutrition standards set by USDA.

Childrens’ and Adults’ Eligibility

CACFP is targeted at children ages 12 and under in participating child care centers and family day care homes as well as chronically impaired adults and people over the age of 60 in participating adult care facilities. In child care and adult care centers, children and adults from low-income families are eligible for free or reduced price meals based on the same eligibility guidelines used in the National School Lunch Program and the School Breakfast Program.

3. The Special Supplemental Program for Women, Infants and Children (WIC)

WIC is a federally funded, preventive nutrition program that is designed to provide supplemental food, nutrition education and access to health care to limited-income women, infants and children (up to age 5) who are at nutritional risk. It was created in 1972 by the Congress as a 2 year pilot project and authorized as a national program in 1974. The program grew to almost 4 billion dollars by 1999 and had 7.3 million participants. In 1998, nearly 70% of recipients had income below the federal poverty level and over one-fourth of them also received food stamps (Jensen, 2001). During fiscal 2002, the average number of people participating in WIC increased almost 3% to about 7.5 million per month. This has been the largest number of WIC participants ever. The total cost of the program over fiscal year 2002 was $4.3 billion (USDA/ERS, 2003).
Who is eligible?
As the name indicates, the WIC program is targeted towards limited-income pregnant women, infants and children focusing on their special nutritional needs based on the assumption that insufficient nutrition during these critical development periods may result in adverse health outcomes. To qualify for WIC benefits, individuals must be nutritionally “at risk” and either be in a household with income less than or equal to 185% of the federal poverty line or be receiving Medicaid benefits. Unlike the FSP’s sliding benefit scale, WIC benefits do not vary with income. Participation in WIC is limited by federal funding levels, which have never been adequate to serve all eligible applicants (Devaney, 1997).

What are the benefits?
The WIC program provides low-income families with 3 main benefits: 1) paper vouchers that can be used to purchase specific supplemental food items at authorized grocery stores; 2) nutrition education; and 3) referrals to health care and social service providers.

4. Head Start
Head Start and Early Head Start are federally funded comprehensive child development programs which provide food and educational services to children from birth to age 5, pregnant women, and their families. In 1964, the Federal Government asked a panel of child development experts to draw up a program to help communities meet the needs of disadvantaged preschool children. The panel report became the blueprint for Project Head Start. The program has grown from a brief, eight week summer program for preschoolers in 1965 to a year round program today. The Head Start program is locally administered by community-based non-profit organizations and school systems in urban and rural areas in all 50 States, the District of Columbia, Puerto Rico, and the U.S. Territories, including many American Indians and migrant children. In Fiscal Year 2002, $653.7 million was used to support nearly 650 programs to provide Early Head Start child development and family support services in all 50 states and in the District of Columbia and Puerto Rico. These programs served more than 62,000 children under the age of three (USDHHS, 2003).

Who is eligible?
Children who have not reached the age of compulsory school attendance are recruited from established poverty areas throughout the county. At least 90% of the children's families must meet the income eligibility as established by the U.S. Department of Health and Human Services. The remaining 10% may come from
families whose income is above the poverty line. These children are accepted on the basis of need resulting from special problems in the family.

*What are the benefits?*

The Head Start program is designed to help break the cycle of poverty by providing preschool children of low-income families with comprehensive services to meet their emotional, social, health, nutritional, and educational needs.

5. **Elderly Nutrition Program**

The nutrition program for the elderly (NPE) is the largest federally funded community-based nutrition program for older persons. It began in 1968 as a 3 year demonstration project and was officially established in 1972 when Congress enacted the National Nutrition Program for the Elderly (Wellman, 2002). The program provides congregate and home-delivered meals (frequently referred to as “meals-on-wheels”), nutrition screening, and an array of other supportive and health services. These meals and services are provided in a variety of settings, such as senior centers, schools, and in individual homes. The services help older participants to learn to shop for, and/or to plan and prepare meals that are economical and which help manage or ameliorate specific health problems as well as enhancing health and well-being. The congregate meal programs also provide the elderly with positive social contact with other seniors at the group meal sites.

*Who is eligible?*

The elderly nutrition program is available to all persons 60 years of age and older, their spouses (regardless of age), nutrition service volunteers, disabled persons under age 60 who reside in housing facilities occupied primarily by the elderly where congregate nutrition services are served, and individuals with disabilities who reside at home. The program is targeted to those in greatest economic and/or social need, with particular attention paid to low-income minorities and rural individuals. Persons age 60 and over who are homebound by reason of illness or incapacitating disability or otherwise isolated are eligible for home delivered meals.

Table 9 provides an overview of the core federal food assistance programs including each program’s target population, eligibility guidelines, whether it is an entitlement program or not, the number of persons served/annual cost for years 2001 and 2002, and the percentage difference.
<table>
<thead>
<tr>
<th>Program</th>
<th>Target Population</th>
<th>Income Eligibility</th>
<th>Entitlement Program</th>
<th>Number of persons served/annual cost FY 2001 *</th>
<th>Number of persons served/annual cost FY 2002 *</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Stamp Program</td>
<td>Low-income households needing food assistance</td>
<td>Gross household income ≤ 130% of federal poverty level (FPL)</td>
<td>Yes</td>
<td>17.3 million per month</td>
<td>19.1 million per month</td>
<td>10.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Net household income ≤ 100% of FPL</td>
<td></td>
<td>$17.8 billion</td>
<td>$20.6 billion</td>
<td></td>
</tr>
<tr>
<td>National School Lunch Program (NSLP)</td>
<td>School-age children</td>
<td>All meals have some level of subsidy</td>
<td>Yes</td>
<td>27.5 million per day</td>
<td>27.9 million per day</td>
<td>1.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduced-price meals: family income between 130% and 185% of FPL</td>
<td></td>
<td>$6.5 billion</td>
<td>$6.8 billion</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Free meals: family income ≤ 130% of FPL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head Start</td>
<td>Low-income children from birth up to five years of age</td>
<td>Family income less than or equal to 100% of the FPL, with allowance for 10% of enrollment to have family income greater than the FPL</td>
<td>No</td>
<td>905,235 per year</td>
<td>912,345 per year</td>
<td>0.80%</td>
</tr>
<tr>
<td></td>
<td>women and their families</td>
<td></td>
<td></td>
<td>$6.2 billion</td>
<td>$6.5 billion</td>
<td></td>
</tr>
<tr>
<td>Special Supplemental Food Program for Women, Infants,</td>
<td>Low-income pregnant, breast-feeding, or postpartum</td>
<td>Household income ≤ 185% of FPL</td>
<td>No</td>
<td>7.3 million per month</td>
<td>7.5 million per month</td>
<td>2.5%</td>
</tr>
<tr>
<td>and Children (WIC)</td>
<td>women, infants, and children up to five years of age</td>
<td></td>
<td></td>
<td>$4.1 billion</td>
<td>$4.3 billion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>who are at nutritional risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child and Adult Care Food Program (CACFP)</td>
<td>Children in participating child care centers and</td>
<td>Reduced-price meals: family income between 130% and 185% of FPL</td>
<td>Yes</td>
<td>2.7 million per day</td>
<td>2.8 million per day</td>
<td>3.7%</td>
</tr>
<tr>
<td></td>
<td>homes; Adults in participating adult care facilities</td>
<td>Free meals: family income ≤ 130% of FPL</td>
<td></td>
<td>$1.7 billion</td>
<td>$1.9 billion</td>
<td></td>
</tr>
<tr>
<td>School Breakfast Program (SBP)</td>
<td>School-age children</td>
<td>All meals have some level of subsidy</td>
<td>Yes</td>
<td>7.8 million per day</td>
<td>8.1 million per day</td>
<td>4.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduced-price meals: family income between 130% and 185% of FPL</td>
<td></td>
<td>$1.5 billion</td>
<td>$1.6 billion</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Free meals: family income ≤ 130% of FPL</td>
<td></td>
<td></td>
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<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
<td>--------------------------------------</td>
<td>------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Summer Food Service Program (SFSP)</td>
<td>School-age children</td>
<td>No income test for eligibility in low-income areas. Any child in the program's operating area may participate</td>
<td>Yes</td>
<td>2.0 million per day</td>
<td>$272 million</td>
<td>- 5.0%</td>
</tr>
<tr>
<td>Senior Nutrition Program</td>
<td>Individuals age 60 and over, spouse, disabled persons under age 60 residing in housing facilities, and disabled persons who reside at home</td>
<td>No income restrictions for recipients, but meals are targeted to persons most in need.</td>
<td>No</td>
<td>Data unable to locate</td>
<td>Data unable to locate</td>
<td>- 4.8%</td>
</tr>
</tbody>
</table>

*Data Source: The figures are based on data provided by the Food and Nutrition Service as of November 2002 (USDA/ERS, 2003); U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Head Start Bureau. Head Start Program Fact Sheet. February, 2003.*
4.3 Private Food Assistance Programs

Private food assistance programs are a part of the “grass-roots, self-help movement.” They constitute the emergency food relief system (EFRS), a relatively small, but vital component of the food assistance safety net. Comprised largely of private, non-profit food banks, pantries, emergency kitchens, and food rescue organizations, EFRS helps ensure adequate nutrition for low-income people who may not be eligible for, or who may find it difficult to participate in other food assistance programs. Both locally and nationally, low-income working families constitute the largest group seeking emergency food. While only about one-eighth the size of USDA’s programs, EFRS’s community based structure and flexibility allow it to fill gaps in the food assistance safety net (USDA, 2001). The EFRS has evolved into a fairly structured system in which food pantries and emergency kitchens (often called soup kitchens) function as the “retailers” in the system, providing food directly to households and individuals. Food Bank or Food Rescue Organizations function as “wholesalers”, supplying the bulk food materials to the food pantries and emergency kitchens to prepare meals.

1. America’s Second Harvest

America’s Second Harvest is the largest domestic hunger relief organization in the U.S. It was founded in 1979 and its mission is to feed hungry people by soliciting and distributing food and grocery products through a nationwide network of certified affiliate food banks and food rescue programs and to educate the public about the nature of and solutions to the problem of hunger in the U.S. Second Harvest currently has a network of approximately 200 regional food banks and food rescue programs that provide food to more than 46,000 agencies which operate more than 94,000 local food programs (Biggerstaff, 2002). It depends entirely on the support of individuals, corporations and charitable foundations.

America’s Second Harvest establishes and develops partnerships with more than 500 national grocery and food service companies (food growers, processors, manufacturers, distributors, and retailers) to secure surplus food and grocery products. It moves the donated food and grocery products through their network of food banks and food rescue organizations to where they are needed most. The food banks and food rescue organizations ensure safe storage and distribute donated goods to local service agencies such as food pantries, community kitchens, soup kitchens, homeless shelters, kids cafes, etc.
2. **Food Banks**

   Food Banks are non-profit, community-based warehouses that essentially play a “wholesaling” role in the delivery of donated food. They solicit, store, and distribute food from local producers, retail food sources, the federal commodity distribution program, and the food industry.

3. **Food Pantries and Emergency Soup Kitchens**

   Food Pantries distribute free food and grocery items to individuals and families who ask for assistance, and soup kitchens provide prepared meals for individuals and families. Since the early 1980's, the number of food pantries and soup kitchens has grown dramatically. There are approximately 34,000 food pantries and 5000 soup kitchens in the United States (Tiehen, 2002). About two thirds of them originated with religious groups. While annual budgets vary across the nation, on an average these small local organizations function on an annual budget of less than $5000 and rely heavily on volunteers for management and service delivery.

   Food and funds for operating costs are obtained from several sources, including individual and group donations and public monies and surplus food through the federal Temporary Emergency Food Assistance Program (TEFAP) (Biggerstaff, 2002; Tiehen 2002). Almost all the soup kitchens receive a significant portion of their food from local or regional food banks.

**Eligibility and Benefits**

   The aid given by food pantries differs in several ways from that given through the food stamp program. The food pantries arise from local needs. Food pantries have a variety of eligibility criteria that can be less stringent than those for food stamps, although they may vary from charity to charity. They tend to be open for a very limited number of days and hours. Some pantries offer “shop through”, where the recipients choose from the food the food pantry happens to have available (with limits on the amount of each type of item and/or the total amount). Others offer pre-bagged benefits, where the recipient is given a pre-set selection and amount of food, usually amounting to a couple bags of groceries that the recipient gets to take with them to prepare meals at home.
Conclusion

The Food Assistance Programs play an important role in alleviating food insecurity, especially among limited-income families that are in dire need of this support. Therefore, they serve an important function by improving dietary health in today's society. Different programs have different levels of success. Public programs such as WIC that target very specific population segments are generally more successful in terms of health outcomes and political acceptability. Programs such as the Food Stamp Program provide the bulk of food assistance, although benefits per individual are low and many needy households are supported by private emergency food programs. Emergency food assistance programs shore up individuals who have no where else to turn. Although these emergency programs appear to be an "unsung" protective factor for many individuals and families, their wide-spread use raises the question of the role of sufficiency of federal food assistance programs, particularly the Food Stamp Program, which is supposed to be the federal government's primary program to combat food insecurity.

In general, food assistance programs must increase their reach in order to realize their full potential. A large number of needy households are not eligible for participation due to stringent eligibility and reporting requirements. Of those that are eligible, a large percentage are unable to participate in programs due to a number of barriers such as access and lack of awareness. These barriers need to be removed so that the reach of these interventions is wider, and covers all vulnerable sectors.

There are several other shortcomings in food assistance programs. They seem to be more palliative than preventive. The programs do not address environmental determinants, access to fresh and nutritious food, or root causes of food insecurity. This is reflected by the fact that people that are assisted by these programs are chronically dependent on them. The foods offered are not always healthy or the most needed, and often consist of surplus commodities. Also, these programs provide little or no nutrition education that can help poor families manage their nutrition budget more effectively.

More work is needed in evaluating the success of these programs. However, some positive strategies can be undertaken to help alleviate the problem of food insecurity and improve the health of the population including:

- USDA efforts to dovetail into relevant activities carried on by other federal agencies, such as departments of education, health and human services, housing and urban development, labor and transportation, so that they supplement their efforts and provide wider and better reach.
• Effective education and outreach measures are needed to increase the public awareness of the causes of food insecurity. Such efforts will also serve to highlight innovative community solutions to hunger, to help behavioral change and to foster health-enabling environments.
• Steps to increase the access and benefits in the Food Stamp Program and increasing availability and funding for the Child Nutrition Programs.
• Ensuring access to reasonably priced, nutritious foods though supermarkets and farmers’ markets in limited-income neighborhoods.
While food security approaches such as emergency food assistance and various anti-hunger programs play the important role of increasing access to adequate, nutritious food in the short run, they are often not equipped to address or intervene in underlying systemic shortcomings of the food system that makes the approaches, unfortunately, of such critical importance. Community food security (CFS) approaches, whose roots go back to the anti-hunger and environmental justice movements of the 1970s and 1980s, perform the vital, complementary role of addressing systemic causes of food insecurity by actively involving communities in the food systems of which they are a part.

In contrast to food security approaches that adopt the individual or household as the primary unit of analysis in measuring and improving food security, the community food security approach takes as its unit of analysis the community as an integrated social and ecological system. Rooted in systems theory, community food security focuses on “the underlying social, economic and institutional factors within a community that affect the quantity, quality and affordability of food” (Kantor, 2001). Succinctly, a community that is food secure is one in which all members of the community have access, at all times, to a “culturally acceptable, nutritionally adequate diet through local, non-emergency sources” (Ashman, 1993).

The CFS approach encompasses a wide range of disciplines and foci. It involves practitioners from such diverse disciplines as community nutrition, nutrition education, public health, sustainable agriculture and community development. Its practice centers on creating and strengthening linkages between the public, private, and non-profit sectors in every segment of the food system – from farm to table. Within the CFS approach, the food system is typically broadly conceived and includes “everything from farmers, farm workers and farm input suppliers to food transporters, wholesale and retail outlets to restaurants, school cafeterias, educators and of course, consumers” (Kneen, 1995).

Interventions to improve prospects for community food security are similarly diverse in nature – targeting one or two aspects of the food systems or all aspects at once. The commonality linking each type

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1 According to the Center for Ecoliteracy (cite), systems theory is based on the assumption that “all living systems share a set of common properties and principles of organization.” As such, systems thinking can be “applied to integrate academic disciplines and to discover similarities between phenomena at different levels of scale…. “.
of intervention or initiative is that it contributes to an equitable, healthful, and sustainable food system (California Food and Justice Coalition, see http://www.foodsecurity.org/CA_Food_Justice_Pledge.pdf). Typically, CFS initiatives stress intervention and change at the policy level and/or local capacity building and community empowerment at the community level. Examples of CFS initiatives, described below in Approaches and Strategies, include farmers’ markets, community and school gardens, community supported agriculture (CSA), and the creation of local food policy councils.
2.1 How do we define the problem? Community Food Security vs. Anti-Hunger Models

Community food security as a concept builds upon, but does not replace, more traditional approaches that take the individual and household as the central unit of analysis and intervention. The individual anti-hunger approach will remain necessary as long as there is poverty, underemployment, and people living with acute or chronic hunger. Indeed, as Kantor (2001) conceives of CFS, it is a process in which CFS initiatives “work in tandem with a strong Federal nutrition safety net and emergency food assistance programs to move people from poverty to self-sufficiency and food security” (p. 20, emphasis added) (also see Allen, 1999).

With the above caveat in mind, the following points highlight some of the key differences between the CFS approach and the anti-hunger approach:²

- A prevention-oriented, PUBLIC HEALTH MODEL, compared with the anti-hunger approach based on a medical model, and focused primarily on addressing existing conditions;

- A SYSTEMS APPROACH that examines causes of food insecurity from grower to consumer, identifying deficiencies and offering solutions at all levels of the food chain;

- A COMMUNITY-LEVEL UNIT OF ANALYSIS, compared with an individual- or household-level in anti-hunger work;

- LONG-TERM TIME FRAMES with an emphasis on planning, coordination of resources, training, and ongoing community economic development, compared with providing emergency relief for individuals;

- LONG-TERM GOALS centered around building community resources, economic opportunities, and sustainable food systems, compared with addressing immediate food needs;

- A FOCUS ON THE MARKETPLACE, or conventional food supply, rather than emergency food and governmental programs;

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² This section is adapted and heavily paraphrased from 1997 CFS Guide (Hugh, Joseph, ed)
- Emphasis on the importance of including community-based organizations and fostering relationships between community-based organizations and the public, private, and non-profit sectors;

- A focus on agriculture, especially in building links between local consumers and local producers;

- An emphasis on policy, especially that which facilitates long-term planning and coordination of enhancements to food access.

Indeed, the community food security approach defines food insecurity holistically as a crisis of the food system. Not only does it seek to address immediate symptoms of the crisis, such as the number of people in any given year who are food insecure or hungry or the number of people with diet-related health problems, it also looks to address the structural causes of such symptoms. For example, the CFS approach might attempt to measure and create change in the following systemic characteristics of the food system: industry-promotion of unhealthy foods; concentration in the food industry; marketplace deficiencies (including inequities in food prices and transportation options); the decline in the U.S. farm sector; or the health effects of pesticides on producers and consumers of food.

The USDA, which has implemented and/or funded a number of programs under the label of Community Food Security, includes the following diverse issues under the CFS rubric:

- Ecologically sustainable agricultural production
- Direct food marketing
- Participation in and access to federal nutrition assistance programs
- Food availability and affordability
- Farmland preservation
- Economic viability of rural communities
- Economic opportunity and job security
- Community development and social cohesion

Given this wide range of issues, each community faces its own set of unique challenges and assets. As such, to define the nature and extent of food security or insecurity in a given community, it is of critical importance to do a formal or informal community food assessment, discussed in the following section.
2.2 Assessing the nature and extent of the problem: Community Food Assessments

The CFS approach, based as it is in participatory approaches to both research and action, typically begins with a community food assessment. A community food assessment is a collaborative and participatory process that systematically examines a broad range of community food issues and assets, so as to inform actions designed to make the particular community more food secure (Cohen, 2002). According to the non-profit Community Food Security Coalition, the key elements of a community food assessment are as follows:

1) A Community Food Assessment examines a range of food issues, and the links between these issues and community goals.
2) A Community Food Assessment is designed to inform and build support for practical actions to enhance community food security.
3) A Community Food Assessment is a planned and systematic process of gathering information about and analyzing community food issues.
4) A Community Food Assessment addresses both needs and assets.

(Pothukuchi, 2002)

- Why do a Community Food Assessment?

Conducting a community food assessment is a participatory means of identifying food system deficiencies and assets of a given community. The process itself can have a number of positive outcomes, namely in building capacity within the community to create positive change. Specifically, assessments often increase community participation in the food system, serve to identify networking and collaboration opportunities, and enhance visibility, awareness and understanding of food-related issues. The outcomes often included increased program development and coordination, empirical data that can be used for proposals, reports, policy briefs and other goals, and concrete actions to improve a community’s food system (Rimkus, 2003).

According to McCullum (2002), community food assessments play an integral role in the three “Ps” of community food security: process, projects and policy. Assessments can help define the community to be served through collaborative partnerships with community groups. They also serve to build the conceptual framework for community food security projects to affect change. And finally, they inform policy around food systems issues.
• **Community Food Assessment Resources**

A number of guides, toolkits and resources exist to assist communities in conducting community food assessments. Both the non-profit Community Food Security Coalition and the USDA are excellent sources of support for practitioners and community members planning or conducting assessments. Both are also excellent clearinghouses for a variety of food security-related resources.


     By Kami Pothukuchi, Hugh Joseph, Andy Fisher, and Hannah Burton, 2002 (123 pages); Edited by Kai Siedenburg and Kami Pothukuchi
     “This Guide includes case studies of nine Community Food Assessments (see PDF file); tips for planning and organizing an assessment; guidance on research methods and strategies for promoting community participation; and ideas for translating an assessment into action for change.” Order here: [http://www.foodsecurity.org/memberinfo.html#pubs](http://www.foodsecurity.org/memberinfo.html#pubs)

   - *CFS: A Guide to Concept, Design, and Implementation*
     Editor: Hugh Joseph, 2000 (57 pp. + appendices)
     “This guidebook details such issues as the concept of CFS, community food planning, needs assessments, building collaborations and coalitions, project implementation, entrepreneurship, funding, program sustainability, case studies, and multiple attachments.” The guidebook can be accessed online at [http://www.foodsecurity.org/CFSguidebook1997.PDF](http://www.foodsecurity.org/CFSguidebook1997.PDF)

2. USDA

   - *Community Food Security Assessment Toolkit*
     By Barbara Cohen. ERS Contacts: Margaret Andrews and Linda Scott Kantor
     ERS E-FAN No. 02-013. 166 pp, July 2002
     “This report provides a toolkit of standardized measurement tools for assessing various aspects of community food security. It includes a general guide to community assessment and focused materials for examining six basic assessment components related to community food security. These include guides for profiling general community characteristics and community food resources as well as materials for assessing household food security, food resource
accessibility, food availability and affordability, and community food production resources. Data collection tools include secondary data sources, focus group guides, and a food store survey instrument. …. It is designed for use by community-based nonprofit organizations and business groups, local government officials, private citizens, and community planners."

(quoted from website).

The report can be accessed online at http://www.ers.usda.gov/publications/efan02013/.

• **Conducting An Assessment** [note: this section is largely adapted - with permission – from the San Francisco Food Systems Guidebook]

Based on information from the guidebooks above and using material that has been adapted (with permission) from the San Francisco Food Systems Guidebook, the following is a synthesis of steps and resources important in conducting a community food assessment. The first section summarizes possible indicators and secondary data sources while the second section discusses methods that are often used in collecting primary data.

### 2.3 Indicators and Data Sources

Adapted with permission from the San Francisco Food Systems Guidebook (Rimkus, 2003), the following is a list of food security indicators and secondary data sources, grouped according to the food system node to which they correspond: production, distribution, consumption and disposal. Also included is a section on demographic and socioeconomic indicators and data sources. Secondary data sources can also be helpful in designing research tools and instruments.

Examples of comprehensive food systems assessments that can be useful to guide future assessment efforts include:


- **Production**
  
  **Indicators**
  - Existence of local policies around food, agriculture, and land usage
  - Number and location of vacant lots, brownfields and available green space
  - Amount of vacant city land that has been converted to food production uses
  - Measures of food imports/exports to and from the community
  - Percentage of produce consumed that is grown in the community, region or state
  - Average annual trucking costs for fruits and vegetables
  - Economic development initiatives or community-owned food processing ventures
  - Existence of any tax or other economic incentives for businesses and homeowners who grow food using sustainable practices
  - Type and quantity of materials used in packaging food
  - Existence of efforts to minimize packaging
  - Residents' access to resources needed to grow food or to purchase food grown regionally and sustainably
  - Residents' access to resources needed to participate in food policy development
  - Number and location of community gardens
  - The number of community, school and/or residential garden training programs
  - The number of students enrolled in or completing garden training programs
  - Degree to which city orchards and backyard fruit trees contribute to the city's fruit consumption
  - Existence of public/private partnerships that strive to maintain public land areas dedicated to food production
  - Degree to which gardening space is incorporated into city planning

**Secondary Data Sources**
- Agricultural Marketing Service (U.S. Department of Agriculture) [www.ams.usda.gov/fv/mktnews.html](http://www.ams.usda.gov/fv/mktnews.html);
  AMS market news on imports of various crops into the United States.

- National Agricultural Workers Survey (U.S. Department of Labor)
The survey samples all crop farm workers in three cycles each year in order to capture the seasonality of the work. The NAWS locates and samples workers at their work sites, avoiding the well-publicized undercount of this difficult-to-find population. Interviews, usually conducted in the respondent's home, collect info on household and family composition, demographics, employment history, wages, benefits and working conditions, health, safety and housing, income and assets, social services and legal status.

- **Distribution**
  
  **Indicators**
  
  - Existence of any nutrition and/or food procurement policies for public institutions, for retail grocers, or for restaurants
  - Existence of effective tax or other economic incentive programs for business involvement in sustainable food systems
  - Percent of household income that is spent on food
  - Fruits and vegetables that are most widely available
  - Fruits and vegetables that are most frequently purchased
  - Extent to which food in supermarkets is labeled by place of origin
  - Availability of organic produce relative to conventionally-grown produce
  - Degree to which food-related establishments buy regionally-produced food
  - Degree to which food-related establishments buy organic, sustainably-grown food
  - Number of local schools, work sites, Head Start sites, senior meal programs and other institutions that offer fresh, healthy menu options that meet the dietary guidelines
  - Promotion of empty-calorie (non-nutritious) foods in schools (vending machines, cafeterias, surrounding neighborhood)
  - Proportion of shelf space in grocery stores and number of restaurant menu items offering healthy food choices
  - Existence of food buying cooperatives or community-owned food retail outlets
  - The number of households served by food buying cooperatives or community-owned food retail outlets
  - Where local residents shop and why
➢ Number and accessibility of supermarkets, convenience stores, liquor stores, restaurants and fast food outlets in community

➢ Availability of safe, convenient, reliable and nonpolluting transportation to points of sale that provide nutritious, affordable, safe and culturally diverse food

➢ Farmers' and residents' degree of participation in and satisfaction with local farmers' market arrangements

➢ Existence of and participation in community supported agriculture programs in city

➢ Residents' knowledge of local and regional food production and food purchasing habits

Secondary Data Sources

➢ Farmers' Market Nutrition Program (U.S. Department of Agriculture, Food and Nutrition Services) www.fns.usda.gov/wic/CONTENT/FMNPfarm_mkt.htm

Site provides information on both the WIC Farmers' Market Nutrition Program and the Seniors Farmers' Market Nutrition Program.

➢ Food Marketing Institute (FMI) www.fmi.org/facts_figs/keyfacts/

FMI conducts substantial research on food marketing, but charges for membership. This report found on its website includes national data on number and type of food stores, trends in grocery shopping practices, average grocery purchases, average supermarket sales, and average Consumer Price Index for all urban cities. Site also offers a free report entitled Supermarket Initiatives in Underserved Communities.

➢ Food and Nutrition Services (U.S. Department of Agriculture) www.fns.usda.gov/pd/

The Program Data site provides selected statistical information on activity in all major Food and Nutrition Service Programs (FNS). These include the Food Stamp Program; the Special Supplemental Food Program for Women, Infants and Children (WIC); Child Nutrition Programs (National School Lunch, School Breakfast, Child and Adult Care, Summer Food Service and Special Milk); and Food Distribution Programs (Schools, Emergency Food Assistance, Indian Reservations, Commodity Supplemental, Nutrition for the Elderly, and Charitable Institutions). Four types of tables are provided: historical summaries, annual state level data for selected elements, monthly national level data for major programs, and the latest available month for state-level participation in major programs.
National Association of Farmers' Market Nutrition Programs [www.nafmnp.org](http://www.nafmnp.org)
Site includes a directory of contacts as well as a national impact report. Includes state contact for Farmers Market Nutrition Programs, newsletters, etc.

Site includes farmers’ market fact sheets, marketing links, directory of farmers’ markets across country.

National Food Service Management Institute [www.nfsmi.org](http://www.nfsmi.org)
Created to provide information, technical assistance and training in food service management for school, childcare, and summer feeding programs. Has published various surveys including Competencies, Knowledge, and Skill Statements for District School Nutrition Directors/Supervisors (2001), Eating at School: A summary of NFSMI Research on Time Required by Students to Eat Lunch, and Professional Development Needs Reported by School Food Service Directors and Recommendations for Meeting Directors' Needs: Results of a National Study.

Progressive Grocer – 2002 Marketing Guidebook
In-depth features by an experienced staff of editors and writers offer insights into trends in store development, technology, marketing, logistics, international retailing, human resources, and consumer purchasing patterns.

Retail Tenant Directory (Trade Dimensions) [www.tradedimensions.com/index.html](http://www.tradedimensions.com/index.html)
The Trade Dimensions Retail Site Database, a tool used primarily by food industry marketers and retailers, contains an updated profile of all supermarkets, mass merchandisers, drug stores, wholesale clubs, and convenience stores. The Retail Tenant Directory and other publications list detailed sales and marketing information on thousands of actively expanding retail chains in the U.S. and Canada.

School Health Policies and Programs Study (SHPPS) (Centers for Disease Control and Prevention) [www.cdc.gov/nccdphp/dash/shpps/index.htm](http://www.cdc.gov/nccdphp/dash/shpps/index.htm)
Conducted to assess school health policies and programs at the state, district, school, and classroom levels. SHPPS 2000 was designed to include: health education, physical education and activity, health services, mental health and social services, food service, school policy and environment, faculty and staff health promotion, and family and community - also collaboration among staff from each school health program component and with staff from state and local agencies and organizations.

➢ The Thin Red Line: How the Poor Still Pay More (Consumers Union)
  www.consumersunion.org/index.htm
  A good resource to see how a total market basket survey can be conducted. Researchers for this guide also assessed market demand in low-income and middle-income communities by considering consumers' driving time to food markets.

• Consumption
  Indicators
  ➢ Residents' typical food consumption patterns or habits
  ➢ Specific foods, portions, and/or nutrients consumed by residents of community
  ➢ Prevalence of hunger and food insecurity
  ➢ Demand for public food assistance programs and emergency food sources
  ➢ Number and demographics of residents accessing emergency food sources (i.e. soup kitchens, pantries, shelters)
  ➢ Ability of public food assistance and emergency food programs to serve all in need
  ➢ Participation in federal food assistance programs
  ➢ Percent of eligible people enrolled in food assistance programs (i.e. School Lunch, School Breakfast, and Summer Food Programs; Food Stamp Program, WIC)
  ➢ Residents' reasons for not accessing public food assistance programs and/or emergency food sources
  ➢ Prevalence of malnutrition (indicated by osteoporosis, iron-deficient anemia, low birth-weight, for example)
  ➢ Prevalence of chronic, diet-related diseases (diabetes, obesity, heart disease)
  ➢ Amount of money residents spend on eating out versus money spent on groceries
- Redemption rate for food stamps and WIC coupons
- Most common food purchases using food assistance vouchers
- Number or percentage of food poisoning cases (salmonella, E. coli, etc.) per year
- Residents’ dependence on out-of-season crops
- Most widely or most frequently consumed fruits and vegetables
- Percentage of produce consumed that is organic
- Percentage of residents’ diets that are made up of non-nutritive foods (alcohol, sugar, soda, etc.)
- Percentage of residents’ diets that come from processed foods (refined grains, sugar, hydrogenated oils)
- Community members’ access to cooking utilities and equipment
- Community members’ cooking skills and knowledge of food and nutrition principles
- Residents’ value or prioritization of food issues, nutrition issues, and/or health issues

Secondary Data Sources

- Behavioral Risk Factor Surveillance System (BRFSS) (Centers for Disease Control and Prevention) [www.cdc.gov/brfss/index.htm](http://www.cdc.gov/brfss/index.htm)
  The BRFSS, the world’s largest telephone survey, was developed and conducted to monitor state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. The basic philosophy was to collect data on actual behaviors, rather than on attitudes or knowledge. Questions are self-reported and change over the years but have included consumption of specific food items (beef, carrots, cheese, doughnuts, cookies, pastries, french fries, green salad, fruit, eggs), dietary fat content, fiber content, and weight status.

- Consumer Expenditure Survey (CEX) (Bureau of Labor Statistics) [www.bls.gov/ro9/home.htm](http://www.bls.gov/ro9/home.htm);
  [www.bls.gov/home.htm](http://www.bls.gov/home.htm)
  Program consists of two surveys—the quarterly Interview survey and the Diary survey—that provide information on the buying habits of American consumers, including data on their expenditures, income, and consumer unit (families and single consumers) characteristics. The Western BLS Information Office is in San Francisco and has reports on the San Francisco-Oakland-San Jose metropolitan area.
Available by region only (West). Includes variables like food stamp participation, WIC participation, NSLP participation, consumption of fruit and vegetable servings, source of food, frequency of shopping, sufficiency of food, and income. Latest data tables are from 1994-96 and 1998.

1994-96 phone survey collecting information on people’s perceptions about the adequacy of their food and nutrient intake, the personal importance they place on dietary guidance messages, their self-appraised weight status, the importance they place on factors relating to buying food, and the beliefs they hold which influence dietary behavior.

This interactive feature allows users to select various commodities (and years) to create customized tables and charts for per capita food consumption. Includes per capita food consumption, nutrient availability, commodity supply and utilization tables, food prices, expenditures, and U.S. income and population.

Food Finder (Olen Publishing) [www.olen.com/food/](http://www.olen.com/food/)
This website, based on the book *Fast Food Facts*, is a tool for looking up nutrition information on foods offered at over 15 fast food establishments. You can query or specify certain criteria to look up, like maximum fat content or food types (burgers, fish sandwich), or display everything in the food finder database. The result screen may be printed for use later.

Includes food expenditures by food type, income bracket, race, region of country (west), head of household’s age, etc. Also a food expenditures briefing room.
Healthy People 2010 (U.S. Department of Health and Human Services)
Includes national baseline data on indicators like overweight/obesity, physical inactivity, chronic
diseases, anemia, school/worksite nutrition counseling, etc. DATA 2010 is an interactive database
system that contains the most recent monitoring data. Data are included for all the objectives and
subgroups identified in the Healthy People 2010: Objectives for Improving Health. DATA 2010 now
contains only national data but state data for selected objectives will be provided when available.

Household Food Security in the United States, 2000 (U.S. Department of Agriculture)
www.fns.usda.gov/fsec/.40
The latest in a series of annual statistical reports on the prevalence of food security, food
insecurity, and hunger in U.S. households, based on the September 2000 Current Population
Survey Food Security Supplement. This year's report, in addition to statistics on food security,
includes information on how much U.S. households spend on food and the extent to which food-
insecure households participated in Federal and community food assistance programs.

Hunger in America, 2001 (Americas Second Harvest) http://www.hungerinamerica.org/;
http://www.secondharvest.org/whoshungry/hunger_study_intro.html
Study provides extensive demographic profiles of emergency food clients at charitable feeding
agencies and comprehensive information on the nature and efficacy of local agencies in meeting
the food security needs of clients. The study is the largest of its kind. More than 32,000 individuals
agreed to share their personal stories through face-to-face interviews at charitable emergency
hunger-relief agencies like pantries, soup kitchens, and shelters. Nearly 24,000 local emergency
hunger-relief agencies completed survey questionnaires about their efforts to serve millions of
hungry Americans.

Interactive Healthy Eating Index (IHEI) http://147.208.9.133/
Online dietary intake assessment tool that allows a consumer to evaluate his or her diet quality in
comparison with the Dietary Guidelines for Americans and the USDA's Food Guide Pyramid. The
IHEI system processes user information on age, gender and dietary intakes and calculates an
overall HEI score, its 10 component scores and intakes of 24 nutrients and dietary components.
• National Health and Nutrition Examination Survey (NHANES) (Centers for Disease Control and Prevention)  www.cdc.gov/nchs/about/major/nhanes/nhanes99-01.htm
Survey which collects information about health including food security and diet habits. NHANES is unique in that it combines a home interview with health tests (like iron status, body composition, and cardiovascular fitness) that are done in a Mobile Examination Center.

• Pediatric Nutrition Surveillance System (PedNSS) (Centers for Disease Control and Prevention)  www.cdc.gov/nccdphp/dnpa/pednss.htm
This ongoing surveillance collects data on low-income children. It uses already available data collected from health, nutrition, and food assistance programs for infants and children, such as the Women, Infants, and Children Supplemental Food Program (WIC); Early Periodic Screening, Diagnosis and Treatment (EPSDT); and clinics funded by Maternal and Child Health Program (MCH) Block Grants. Data are collected on socio-demographic variables (ethnicity/race, age, geographic location), birth weight, anthropometric indices (height/length, weight), iron status (hemoglobin and/or hematocrit), and breastfeeding.

• Youth Risk Factor Surveillance System (YRFSS) (Centers for Disease Control and Prevention)  www.cdc.gov/mmwr/preview/mmwrhtml/ss4905a1.htm ; www.cdc.gov/nccdphp/dash/yrbs/2001survey.htm
1999 Survey includes questions regarding weight and dieting; 2001 Survey includes consumption of 100% fruit juices, milk, fruit, green salad, potatoes, carrots, and other vegetables, during the past 7 days.

• Disposal
Indicators

• Degree of food overproduction
• Percentage of food surplus that is donated
• Existence of incentives (tax or otherwise) to encourage food producers to donate excess
• Number of gleaning programs (programs that pick up and use leftover food from farms, stores, restaurants, etc)
• Amount of food collected from local or regional gleaning programs
• Amount of food and food packaging material that ends up in trash and in landfills
Type of foods that end up in trash that can be composted
Degree of recycling and compost practices among residents and businesses
Reasons residents/businesses do not reuse, recycle, or compost
Locations of recycling yards, public compost-piles and other drop-off sites in city
Where trash ends up and how it gets there
Existence of local, active educational programs around composting and waste reduction
Existence of organizations trying to decrease food packaging and educate consumers about buying sensibly to reduce packaging
Existence of infrastructure that encourages all food-related establishments to donate excesses

Secondary Data Sources
This is a resource guide on food recovery programs for businesses, community-based profit or nonprofit organizations, private citizens, and public officials. It describes some of the prominent food recovery activities already taking place, and suggests how a community, a business, or an individual can support existing programs or begin new efforts. It also outlines key considerations relating to legal issues and food safety.

**Demographic and Socioeconomic Characteristics**

**Indicators**
- Labor force status
- Income status
- Poverty rates
- Stats on sex, age, race and ethnicity of community members
- School enrollment
- Educational Attainment
- Participation in and eligibility for federal, state and local entitlement programs

Secondary Data Sources
- American Fact Finder (U.S. Census Bureau) [http://factfinder.census.gov/servlet/BasicFactsServlet](http://factfinder.census.gov/servlet/BasicFactsServlet)
This site is a clearinghouse that combines data from several regular national surveys: The Decennial Census (every 10 years), The American Community Survey (ongoing), The Economic Census (every 5 years), and The Population Estimates Program (prepared annually). American Fact finder allows you to enter specific addresses to find your census tract and then develop maps and/or tables to represent different indicators for your specific census block, census block group, county, metropolitan area or state. Demographic, social, economic and housing characteristics can be tracked by census block group (areas containing 4,000 people).

- **Child Trends Databank** [www.childtrendsdatabank.org/index.htm](http://www.childtrendsdatabank.org/index.htm)
  The website provides regularly updated access to very wide range of local, state, national and international data on the topics of health, mental health, substance abuse, social and emotional development, poverty, income, employment, education, general demographics and other indicators.

  Estimates are calculated with data collected from employers in all industry divisions in the San Francisco primary metropolitan statistical area. Occupational index includes a category on food preparation and serving which tallies the number of people employed in each (head chef, cook, bartender, server, dishwasher, etc.), mean and median hourly wage, and mean annual income. Data can be compared to other U.S. cities, states, or national averages.

- **Survey of Income and Program Participation (U.S. Census Bureau)**
  [www.sipp.census.gov/sipp/sipphome.htm](http://www.sipp.census.gov/sipp/sipphome.htm)
  This is a continuing monthly survey intending to collect information on source and amount of income, labor force information, program participation and eligibility data, and general demographic characteristics to measure the effectiveness of existing federal, state, and local programs; to estimate future costs and coverage for government programs, such as food stamps; and to provide improved statistics on the distribution of income in the country. Data is available via FERRET (Federal Electronic Research and Review Extraction Tool).
2.4 Community Assessment Methods

Adapted from the San Francisco Food Systems Guidebook, the following is a compilation of formal and informal research methods that have been used in community food assessments. For more in-depth discussion of the strengths and weaknesses of each of these methods, refer to [http://www.sffoodsystems.org/pages/research.html](http://www.sffoodsystems.org/pages/research.html).

- **Formal Methods**
  - **Document Review** involves gathering and analyzing key documentary material such as laws, regulations, contracts, correspondence, memoranda and routine records on services and clients. These kinds of documents are a useful source of information on program activities and processes, and they can generate ideas for questions that can be pursued through observation and interviewing.
  - **Survey Methodology** is helpful in its interdisciplinary orientation (many uses) and systematic collection of information. A good survey requires expertise and resources to conduct and the interviewer is not permitted to pursue issues of interest not included in the guide. Surveys can vary considerably in size and type of sample. Many surveys study all persons living in a defined area, but others might focus on special population groups (e.g. children, physicians, community leaders, or the unemployed) or even inanimate objects (e.g. soils, housing). Surveys may be conducted with national, state, or local samples, collecting data through mail, telephone, Internet, or in-person interviews.
  - **Photo novella** is a means to convey messages or obtain information presented as a short dialogue with pictures like a comic strip. Photo novella is clear with engaging pictures that are arranged in logical sequence plot, characterization, visual style and pacing of message reflects home culture around a particular topic or issue. This technique is best when constructed by members of the audience.
  - **Photo documentation** uses photographs as a means of documenting the current state of a place or comparing “before” and “after.”
  - **Geographic Information Systems (GIS)** uses computer software programs to map out specific resources or outlets in a community.
- **Direct observation** involves the systematic noting and recording of activities, behaviors and physical objects in the setting being studied as an unobtrusive observer.

- **Key informant interviews** involve an individual, who as a result of their knowledge, previous experience or social status in a community has access to valuable information such as insights about the functioning of the community, problems and needs.

- **Participant observation** requires the researcher to become, in a sense, a member of the community or population being studied. The researcher participates in activities of the community, observes how people behave and interact with each other and with outside organizations, and tries to become accepted as a neighbor or participant rather than as an outsider. The purpose of such participation is not only to see what is happening but also to feel what it is like to be part of the group.

- **Semi-structured interviews** involve the preparation of an interview guide that lists a pre-determined set of questions or issues that are to be explored during an interview. This guide serves as a checklist during the interview and ensures that basically the same information is obtained from a number of people. There is a great deal of flexibility in the order and workings of the questions. The interviewer is free to pursue certain questions in greater depth.

- **Standardized open-ended interviews** involve a set of open-ended questions carefully worded and arranged in advance. The interviewer asks the same questions to each respondent with essentially the same words and in the same sequence.

- **Informal conversational interviews** are appropriate when you want substantial flexibility. This method does not rely on a predetermined set of questions, but rather the spontaneous generation of questions in the natural flow of an interaction. Questions are formed in whatever direction appears to be appropriate, depending on the information that emerges from observing a particular setting, or from talking to one or more individuals in that setting.

- **Focus group interviews** involve small groups of people who share similar backgrounds and experiences. Participants are asked to reflect on the questions asked by the interviewers, provide their own comments, and listen to what the rest of the group has to say and react to their observations.
Focus groups differ from other interviews in that they collect people’s opinions and perspectives in a social context. Typically, these interviews are conducted several times with different groups so that the evaluator can identify trends in the perceptions and opinions expressed. The interviewer acts as facilitator introducing the subject, guiding the discussion, cross-checking each other comments and encouraging all members to express their opinions.

- Community interviews (hearings, meetings, and testimonies) are conducted as public meetings in which the whole community is consulted. Typically, these interviews involve a set of factually based fairly close-ended questions. Once the interviewers pose the question, the group will interact to get a consensus around an answer.

- **Informal Methods** (this section taken, with permission, from San Francisco Food Systems Guidebook)
  - Community Needs Audit (Sustain, 2000) – Involve children, youth, adults, and elderly to share concerns about community issues and possible solutions. Facilitate focus groups and/or collect cards outlining areas of greatest concerns and ideas for solutions. Create a matrix showing the gender and age analysis of information collected. Examine which subgroups are interested in which areas and how they overlap.
  
  - Shopping Tables (Sustain, 2000) – Set up tables outside of major shopping outlets/post offices to gather residents’ perspectives on local shopping facilities. Find out how and why they shop in the area or in other areas. Score shops against different criteria (hygiene inside and out, pricing, quality of service, variety of goods, convenience of location, hours open). Findings may be communicated with store owners, helping them to see ways to possibly increase their customer base.
  
  - Income Charts (Sustain, 2000) – Have participant groups draw bar charts or pie charts to represent how they divided their weekly income (rent, electricity, food, etc.). Compare the percentage of income spent on food across diverse groups. Encourage participants to look more closely at how they spent their money on food, what they bought, how, and what changes they could make.
  
  - Food Wealth Line (Sustain, 2000) – Recruit participants out on the street and have them mark where they stand on a “food wealth line.” One end of the line represents having enough money to buy all the food desired, without worrying, and the other represents having to budget very carefully, every
day. Ask people to put a cross where they felt they were on the line and to explain why, with answers recorded on post-it notes.

- **Money Stretching Flip Chart** (Sustain, 2000) – Recruit participants out on the street and ask them to write down anything on a flip-chart entitled “How do you make your money go further?” As other people walk past, ask them to put colored dots next to each coping strategy that they also do. Using this method, community members are able to hear others’ coping strategies and possibly take home new ideas on having their food budget stretch further.

- **Mobility Maps** (Sustain, 2000) – Have groups consider where people in the community shop for food and how far they have to travel. Participants can start by drawing their house in the center of a poster board and then the food assets in the community in concentric circles. Groups can present this visual information.

- **Body Maps** (Sustain, 2000) – Draw the shape of a body or get someone to lie on the ground and draw around them. Encourage participants to creatively analyze and display how the foods they eat affect their body.

- **Photo Prompt** – Show participants a photo from a food outlet in their neighborhood and solicit their feelings or reactions to the image. Find out how they feel about going there, shopping there, eating there, customer service, what is available, the sense of community, etc.

- **Creative portrayal** – Use creative ways to engage the community in sharing their concerns and getting the attention of media and policymakers. For example, use children’s drawings to convey their experiences around food and agriculture. Or, have residents write letters to key stakeholders on paper plates!

- **Transect Walks** (Sustain, 2000) – Walk through an area with a local person and note down details and features to produce a “transection” of the area. Especially when involving elder people, it is possible to discuss how an area has changed over time and develop a historical perspective. Findings can be mapped onto a transect diagram.
➢ **Food Diary** (Sustain, 2000) – Have participants record everything they eat and drink over a certain period (e.g. course of a day/week). This can be very simple or detailed, showing portion sizes, where they ate, how much time they took to eat, with whom they ate, etc. Compare profiles and routines for different people and seasons.

➢ **Flow of Food** (Hora, 2001; Allen, 1997) – Choose specific food items found in the grocery store and trace their path from the farm where they originated to the store shelf. Find out the distance traveled, the fuel expended during transport, the number of entities involved in processing, etc. Consider calculating the “true cost of food.” Compare prices to direct marketing opportunities like farmers’ market.

➢ **SWOT Analysis** (Allen, 1997) – Gather a team to analyze the neighborhood’s external environment to identify key food-related factors (strengths, weaknesses, opportunities and threats). Identify the impact that both market and non-market factors will have on the local food system in terms of accessibility, affordability, cultural appropriateness, and non-emergency food sources.

➢ **Food Pricing** (Allen, 1997) – Gather a team to assess availability and prices of specific foods in different neighborhoods. Identify stores in both low-income and higher-income census tracts. Team can identify food items in several food categories that contribute to a typical food basket (e.g. Thrifty Food Plan) or specific food items of interest (e.g. fresh produce) and record price of store brands and cheapest national brands. Try to ensure that surveys are conducted on the same day across stores and record the price for the same size package. Teams might also record comments on food quality.

➢ **Youth Oral History Project** (Allen, 1997) – Involve students in project by requesting that they identify an elder in their community and conduct an interview. Have them find out information about the history of food outlets in the community, the changes in the local food system and its residents’ eating practices, etc.

➢ **Food Waste Study** (Allen, 1997) – Involve participants in an assessment of plate waste in an institutional cafeteria or community restaurant. Have them identify and weigh food waste on plates, trays, or in garbage cans and possibly estimate dollar value of wasted food, how many persons could
be fed, how much landfill space it will fill, etc. Participants could also interview people responsible for community waste management.

- **Food-Related Business Survey** (Allen, 1997) – Use this survey to estimate the significance of the food sector in providing employment opportunities for community residents, demand of food-related goods by community residents, business owners' satisfaction with their community locations and business' future viability. Participants distribute questionnaires to all food-related businesses and make follow-up calls to those that do not respond. (Questions cover type of business, how long it has been in neighborhood, number of employees, trends in this number, trends in sales volume, customer demographics, own/lease of business space, type of business ownership, satisfaction with present location, desired improvements in neighborhood, etc.)

- **Ideal Futures** (Pretty, 1999) – Ask participants how they would like things to be in 20 years time – beyond what is likely to what is ideal. Have participants discuss ideal future in small group discussions, along with potential actions to get there. Or, have them draw/describe ideal future on wall charts.

- **Search Conference Model** (North Country New York) – Bring together a broad range of community residents (farmers, processors, market managers, local agency staff, religious leaders, teachers, low-income mothers, and legislators) for a two-day conference. Engage the community in reviewing the past and present, create ideal future scenarios, identify common ground, and develop action plans. Questions to address include: (1) Who is feeding you and what are you eating? (2) How can we build a stronger community through better management of local food resources? (3) How should our local food system look and work in the next five years? Next ten years?

- **Food Security Measurement Tool** (Cohen, 2002) – This is a standard survey tool involving 19-questions to classify households according to 4 levels of food (in)security. It is used in the food security supplement of current population survey and in the California Health Interview Survey.

- **Asset Mapping** (Kretzmann, 1993; 1996; Kretzmann, 1996) - Draw a map of the communities' assets in terms of capital resources, human resources, and financial resources. Asset mapping provides a picture of the community, its people, organizations, resources, problems, and opportunities. It is helpful in compiling useful background information for potential projects and identifying potential
partners. Addresses can be mapped manually or using software (GIS) and can document relationships that were previously ignored or taken for granted. Data collection may take some time if basic computing resources and skills are unavailable or if assets or features most important to the community may not be available in database form. Maps may need to be updated frequently.

- **School Walk Through** (Center for Commercial-Free Public Education) - Recruit a group to walk through your school. Look for places where food is marketed such as on company sponsored educational materials, posters and textbooks with company names and ads, banner ads on computers, Channel One, soda machines, etc. Take pictures, collect examples, and write it all down. Use this information to show your local school board members the commercialism in your school or district.

- **Billboard Analysis** – Recruit a team of residents to locate all the billboards in the community/surroundings and assess the food marketing and health-related messages conveyed on them. Use this information to illustrate the powerful presence of the media in supporting or obstructing healthy lifestyle decisions.

- **Media content analysis** – Observe and analyze the way that hunger, agriculture, or food issues are portrayed in the media (newspapers, radio, television, etc.). Question how this portrayal affects the values of the community and larger society. Develop a question that you would like to answer and gather, categorize, and organize all media covering your issue within a specific time frame.

### 2.5 Sample Food Systems Assessments and Related Resources

Food systems assessments range from comprehensive large scale to focused small scale measurements of supply of and demand for healthy foods in multi-city regions, single cities, and select neighborhoods. All types can serve as guides to future assessment efforts. Examples include:


Other resources related to food system assessments include:


Approaches and Strategies

A wide-variety of CFS initiatives are being implemented nationwide. These diverse initiatives share a philosophical commitment to the following five principles although in practice they might fulfill only one or two.

1. Meeting food needs of limited income communities and populations;
2. Building up the food resources of communities to meet their own needs, including supermarkets, farmers’ markets, gardens, transportation infrastructure, community-based food processing ventures, school meals programs, and urban farms;
3. Emphasizing community self-reliance and empowerment and enhancing the ability of individuals to provide for their own food needs rather than encouraging dependence on emergency and charity food relief;
4. Protecting local agriculture and building links between farmers and consumers, thereby maximizing the relationship between local food consumption and locally food grown; and
5. Promoting, through interdisciplinary analysis and thorough planning, a community-responsive food system based on stable, local agriculture.

- Joseph 1997; Pothukuchi 2002

3.1 Types of Initiatives
(For a detailed listing of specific community initiatives, see Appendix C)

• Direct Food Marketing
  Any marketing method whereby small-scale farmers sell their produce directly to consumers which provides farmers with economic stability while ensuring consumers access to fresh and high quality produce often at lower than supermarket prices. Types include: farmer-to-institution (i.e., farm-to-school) and farmer-to-consumer (i.e., farmers’ markets, community supported agriculture (“CSA” or “subscription farming”), hybrid farmers’ market and CSA, roadside farm stands, and U-pick or pick your own operations).

• Agritourism
  Activities that provide opportunities for small scale farmers and ranchers to share the rural experience with urban visitors for the purpose of enjoyment, education, or active involvement in the
activities of their operation as a mean of generating revenue. Types include: Farm stays, farm field trips, fairs, festivals, and harvest maps.

- **Value Added Agriculture**
  Activities that alter farmers' agricultural products for the purpose of gaining marketing advantages and charging higher than commodity prices. Types include: Preparing, bagging, packaging, bundling, and pre-cutting.

- **Sustainable Agriculture**
  Activities that maximize farmers' reliance on natural, renewable, and on-farm inputs, that consider the environmental, social, and economic impacts of farm management practices, and that help residents supplement their diets with produce grown in their own community. Types include: Organic farms, edible gardens (i.e., community, school, and backyard), and urban farms.

- **Entrepreneurial Projects**
  Activities designed to train community members to start and manage their own small businesses to provide an economic base for rural and urban communities, jobs, social cohesion, and the income necessary to purchase fresh and nutritious foods. Types include: Food buying and selling cooperatives, community kitchens, grocery stores, and preparing, packaging, and selling foods, job training programs, and providing other products and services for a profit.

- **Nutrition Education and Outreach Programs**
  Activities that help to ensure that limited income families continue to be eligible for, have access to, increase the number of eligible households that participate in Federal Nutrition Programs (the "nutritional safety net") like Food Stamps and Women Infant and Children (WIC) and that educate about the importance of proper nutrition and exercise. Types include: Food Stamp Nutrition Education Program (FSNEP), Expanded Food and Nutrition Education Program (EFNEP), and California 5 A Day.

- **Transportation**
  Activities that provide transportation to enable access to fresh and nutritious food at an affordable cost. Types include: Supermarket shuttles, farmers' market shuttles, and bus lines that pass food retailers.
• **Environmental Conservation**

   Activities that preserve land in agricultural use or protect the natural resource base. Types include: Farmland preservation, greenbelts, agricultural land trusts, conservation easements, urban and city planning to preserve green space for farming in/near communities, and training in IPM/ICM, land use, water use and quality, farm labor, and agricultural chemical use reduction for new entry farmers.

• **Food Policy Councils**

   Government sanctioned or grassroots collaborations between public and private stakeholders from various segments of a state or local food system which gives voice to the concerns and interests of a broad array of interested parties including those who have long been under-served by agricultural institutions, provides an opportunity for a focused examination of how state and local government actions shape the food system, and creates a forum in which people involved in different parts of a food system and government can learn more about what each does – and to consider how their individual actions impact other parts of the food system. The primary goal of many food policy councils is to examine the operation of a food system and provide ideas or recommendations for how it can be improved. A food policy is any decision made by a government institution which shapes the type of foods used or available as well as their cost, or which influences the opportunities for farmers and employees, or effects food choices available to consumers.

• **Food Gleaning and Food Recovery**

   Following a basic humanitarian ethic that has been part of societies for centuries, “gleaning,” or gathering the extra crops that are left in fields after a harvest, goes back at least as far as biblical days. The term “field gleaning” refers to the collection of crops from either farmers’ fields that have already been mechanically harvested or from fields where it is not economically profitable to harvest. Coupled with recovery of perishable, nonperishable, prepared, and processed foods from wholesale and retail sources, “gleaning” denotes the collection and distribution (donation) of food to poor, disadvantaged, and hungry individuals. Types include: Field gleaning, perishable food rescue or salvage, food rescue, and nonperishable food collection.

• **Other resources**

   Several organizations hold periodic conferences that include Community Food Security issues and activities. Funds for CFS initiatives can be sought through both public and private sources, and some
state and local level organizations focus on CFS activities and provide useful resources. Some of these organizations are listed below.

- **Conferences**
  - EcoFarm [www.eco-farm.org](http://www.eco-farm.org)
  - Bioneers [http://64.45.12.200/conference_page/conferencehub.html](http://64.45.12.200/conference_page/conferencehub.html)
  - Community Food Security Coalition [www.foodsecurity.org](http://www.foodsecurity.org)

- **Funding**
  - Community Food Security Coalition [www.foodsecurity.org](http://www.foodsecurity.org)
  - United States Department of Agriculture Cooperative State Research Extension and Education Services [www.reeusda.gov/1700/funding/ourfund.htm](http://www.reeusda.gov/1700/funding/ourfund.htm)
  - Sustainable Agriculture Research and Education Program [http://wsare.usu.edu](http://wsare.usu.edu)
  - The Foundation Center [http://fdncenter.org/](http://fdncenter.org/)
  - California Nutrition Network, California Department of Health Service [www.dhs.cahealthnet.gov/cpns/funding/fund_food.htm](http://www.dhs.cahealthnet.gov/cpns/funding/fund_food.htm)

- **State and Local Level Resources**
  - Center for Eco-Literacy, [www.ecoliteracy.org](http://www.ecoliteracy.org)
  - California Food and Justice Coalition

### 3.2 Case Studies of Community Food Security Initiatives

Because the community food security approach is a systems approach (i.e., deals with multiple aspects of a food system), CFS initiatives often have multiple objectives. Community food security is
commonly conceptualized as encompassing five central principles (see box below). To illustrate how community food security projects embody some or all of the five basic principles that are central to the Community Food Security approach in practice, three different types of projects, exemplary in that they meet all of the five principles, are described below:

- **The People's Grocery, Oakland, CA**

  The People's Grocery is a food justice and community economic development initiative started in 2001 based in the limited-income community of West Oakland, CA that will simultaneously function as a locally-owned organic grocery store and an entrepreneurial business training program.

<table>
<thead>
<tr>
<th>Five Basic Principles Central to CFS Approach</th>
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<tbody>
<tr>
<td>1. Meeting the food needs of limited-income populations.</td>
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<tr>
<td>2. Building up a community’s food resources to meet its own needs. These resources may include supermarkets, farmers’ markets, gardens, transportation, community-based food processing ventures, and urban farms.</td>
</tr>
<tr>
<td>3. Emphasizing community self-reliance and empowerment. Community food security projects emphasize building individuals’ abilities to provide for their own food needs, rather than encouraging dependence on emergency and charity food relief.</td>
</tr>
<tr>
<td>4. Maximizing the relationship between local food consumption and locally food grown thereby building better links between farmers and consumers.</td>
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<tr>
<td>5. Promoting a community-responsive food system based on stable, local agriculture.</td>
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(Joseph 1997; Pothukuchi 2002)

The project uses food and creative organizing strategies to address many social issues, empower, and bring greater justice and health to the people of West Oakland. The goal of the project is to attend to the immediate need of West Oakland residents for access to healthy food, employment opportunities, and educational programs while building a regional food system and local economy that counterbalances the impacts of globalization.
Its mission is to uphold the human right to healthy and affordable food and to build community self-reliance by increasing neighborhood access to locally-produced fruits and vegetables and by promoting social enterprise, youth entrepreneurship, sustainable agriculture and grassroots organizing. Its vision is to help transform West Oakland into a thriving center of economic well-being, sustainability, and social justice supported by an entrepreneurial spirit of innovation and self-determination. The project uses a cross-sectoral strategy of bringing grassroots organizing and street-level marketing together with socially responsible business and agricultural practices to positively impact problems facing West Oakland.

How the People’s Grocery addresses the principles central to the CFS approach:

- It is **meeting the food needs of limited-income populations** by being located in West Oakland, a neighborhood where 76% of the 32,000 residents live below the poverty line. A 1998 demographic study estimated that the median household income was $14,788 and that by 2005 the mean household income in West Oakland would be the lowest in the City of Oakland. West Oakland suffers from high unemployment and concentrated welfare dependency. Only 41% of its residents participate in the workforce and nearly 83% of its public school students receive free or reduced meals. Infant mortality in West Oakland is 16.5%, the worst in all of Oakland.

- It is **building up a community’s food resources to meet its own needs** by encouraging the development and retention of locally-owned, socially responsible businesses, operating a mobile grocery store and fresh produce street stand, and establishing a non-profit cooperative grocery store.

- It is **emphasizing community self-reliance and empowerment** by providing employment, entrepreneurial business training and life skills for youth and educating residents about sustainable agriculture, health/nutrition, and social justice.

- It is **maximizing the relationship between local food consumption and locally food grown thereby building better links between farmers and consumers** by supporting locally-owned family farms, organic farms and farmers of color and strengthening the ability to produce food locally through urban agriculture.

- It is **promoting a community-responsive food system based on stable, local agriculture** by sponsoring and partnering in the operation of The City Slicker Farm, a 4000 sq-ft market farm in the heart of West
Oakland. The City Slicker Farm aims to provide the residents of the neighborhood with affordable, ecologically-grown produce (and hire some of them to work on the farm). A seasonal variety of fruits and vegetables are grown in raised beds and sold or donated twice a week at a stand in front of the farm. The site serves as a key way to draw people into the project and as a venue for hands-on learning about urban renewal and regeneration. Neighborhood youth and school groups frequent the garden and help plant, compost and harvest. Gardening days, workshops, and experiments on how to bioremediate lead contaminated soil by using mushrooms are held at the garden. City Slicker Farm hosts community workshops in such topics as back yard gardening, permaculture, composting, and bioremediation. Other projects include free vegetable starts and seeds.

For more information: http://www.peoplesgrocery.org. The People's Grocery, 820 Wood St., Oakland, CA 94607, info@peoplesgrocery.org, Brahm Ahmadi (510) 420-8622, Malaika Edwards (510) 763-0328

- **Farm Fresh Choice, Berkeley, CA**

  Farm Fresh Choice is a hybrid CSA and farmers' market project sponsored by the Ecology Center in Berkeley, CA. This community-based project that started in 1999 offers residents of Berkeley quality fresh regional produce at below retail prices. The mission of Farm Fresh Choice is: 1) to improve health and nutrition by increasing access and consumption of fresh, nutritious and affordable fresh fruits and vegetables to communities with limited access to produce outlets; and 2) to support small scale independent sustainable farmers in the Northern California region.

  Farm Fresh Choice contracts directly from small scale local farmers who reflect the socioeconomic and ethnic characteristics of the communities they serve and who do not use harmful chemical pesticides or fertilizers on their crops. Produce is purchased from farmers in bulk at the Tuesday afternoon Berkeley Farmers' Market and delivered to produce stands conveniently located at three after-school programs in West and South Berkeley neighborhoods. The project functions similarly to a CSA where boxes of produce are purchased weekly but members are able to select anything they like from a Farm Fresh Choice "produce stand," (i.e., "farmers market") which has a wide variety of seasonally available produce. To become a member, one must agree to purchase $7 of produce every week. Membership in Farm Fresh Choice is free and purchases are made using a punch card system (28 punches worth 25 cents each). Once a week, when parents come to pick up their children at one of the after-school programs, they can take home a bag full of farm fresh produce selected to their family's tastes.
How Farm Fresh Choice addresses the principles central to the CFS approach:

- **It is meeting the food needs of limited-income populations** by contracting with local small-scale limited-income ethnic farmers and making quality affordable fresh produce available to urban residents in Berkeley, a community with a particularly high rate of chronic disease, at locations where limited income families naturally come - sites of after-school and summer school programs - so consumers do not have to make special trips to purchase produce. Farm Fresh Choice is subsidized so that participating farmers can sell their produce at cheaper prices and those savings can be passed on to consumers. The project also organizes events, including an annual festival, to publicize the project in the community, puts on cooking demonstrations, publishes a seasonal newsletter, and distributes recipes to promote better nutrition.

- **It is building up a community’s food resources to meet its own needs** by establishing produce stands in local neighborhoods.

- **It is emphasizing community self-reliance and empowerment** by creating a youth peer-based nutrition education program with paid internships, organizing a food and justice youth camp for young people from communities of color in Oakland, Berkeley, and San Francisco who will visit farms, participate in cooking classes, share meals prepared from farm-fresh foods, and discuss issues that their communities face, and using outreach workers (from the community?) to coordinate distribution at each site and having them participate in weekly nutrition education training so they can provide nutrition information at the sites.

- **It is maximizing the relationship between local food consumption and locally food grown thereby building better links between farmers and consumers** by providing a formal mechanism for on-going direct linkages between local farmers and local consumers – eliminating distributors and encouraging the economic viability of small scale independent farms in the region.

- **It is promoting a community-responsive food system based on stable, local agriculture** by selling produce that comes directly from farms located less than three hours from Berkeley, and that are picked within 24 to 48 hours of sale. Farm Fresh Choice’s form of operation provides stability for both farmers and consumers – farmers have fixed and increased market outlets from the CSA and consumers have reliable sources of fresh affordable produce from the produce stands.
Youth Envision, San Francisco, CA

Youth Envision was formed in 2001 to conduct a food study of the Bayview Hunters Point neighborhood in San Francisco to identify and promote strategies for improving access to nutritious food there, while also providing job training for community trainees and youth interns. The project was a multi-institutional collaboration involving a public agency (San Francisco Department of Public Health Environmental Health Section), a private community-based organization (San Francisco League of Urban Gardeners) that had long been active in urban agriculture and food security projects in the neighborhood, an organization with experience in the neighborhood (Literacy for Environmental Justice), and other city agencies. The institutions contributed either funds, in-kind staff time, or other resources to the project.

Since the project focus was on youth empowerment, it combined learning about the food system with community actions. After training and with the support of organization staff, youth advocates conducted a food study to learn where people were getting their food, the barriers to purchasing healthy food, and changes that would help people to purchase healthy foods. Youth advocates collected survey responses from more than 280 individuals at grocery stores, churches, community colleges, a post office, and a fast food restaurant in the Bayview Hunters Point neighborhood. They analyzed data, made recommendations to improve food access, and shared research findings through meetings and presentations with neighborhood residents, community organizations, and service providers. The youth’s work with corner stores continues today and action plans have been developed for the local farmers’ market, corner stores, and a new or improved grocery store.

How Youth Envision addresses the principles central to the CFS approach:

- It is meeting the food needs of limited-income populations by working in one of the fastest growing and most ethnically diverse neighborhoods in San Francisco, which is also among the poorest.

- It is building up a community’s food resources to meet its own needs by conducting outreach for a new farmers’ market, community mapping of food assets, identifying need for grocery store/supermarket, farmers’ market in neighborhood, better quality food in corner stores, and healthy fast food retailers,
creation of new Bayview Community Farmers’ Market, obtained agreement from city transit authority to provide new shuttle routes from the neighborhood to food sources.

➢ It is emphasizing community self-reliance and empowerment by utilizing a participatory action model to train youth in the skills and resources needed to investigate food security in their own neighborhood including survey methods, data analysis, health impact assessment, and public communications, youth assisted in creating a work plan, deliverables, and data collection instruments, youth collected and analyzed data, and made recommendations, youth assisted with outreach, vendor relations, and operation of new Bayview Community Farmers’ Market.

➢ It is maximizing the relationship between local food consumption and locally food grown thereby building better links between farmers and consumers by encouraging corner store owners in the neighborhood to make commitments to stock a minimum amount of fresh food.

➢ It is promoting a community-responsive food system based on stable, local agriculture by creation of a neighborhood farmers’ market that includes produce from local farmers.

For more information: Fernando Ona, Health Educator/Medical Anthropologist, San Francisco Department of Public Health, 1390 Market Street, Suite 822, San Francisco, CA 94102, (415) 252-3939, Fernando.ona@sfdph.org
Conclusion

In the United States, the most productive agricultural nation in the world, achieving adequate quantities of safe, nutritious, and affordable food for the entire population remains an illusive goal. In spite of an abundance of food, other trends are threatening the important goal of achieving food security for all individuals, households and communities in the United States. These trends include increased pressure on farmland, declining farm profits, widening distance between producers and consumers, and greater concentration in agricultural production and processing operations.

In Section III of this document, we have presented the Community Food Security approach to addressing both the root causes and symptoms of food insecurity. The CFS movement considers food insecurity to be a symptom of a food system that is out-of-balance. Therefore, CFS proponents believe that it is necessary to understand issues of poverty, hunger, and nutrition in a dimension that crosses disciplinary boundaries, considers environmental, economic, and social factors, and integrates research, policy, and practice in order to address the root causes of food system imbalances. Another tenet of the CFS approach is that systems approaches are required because they reflect the actual complexity of food systems.

The CFS approach seeks comprehensive, innovative, and long-term solutions to counteracting dominant trends in the nation's food system. It uses environmental and nutritional enhancement as catalysts for broader social advances (i.e., social and economic justice) as well as for meeting immediate needs (i.e. poverty and hunger alleviation). The approach is a broad framework designed to change the structure of the food system by fostering the ability of communities to meet their own food needs (i.e. limit reliance on emergency and food assistance programs) and the building of sustainable local food systems. Those in the CFS movement believe that this approach is more likely to be sustainable than approaches that meet only short-term needs.

The community food security movement is gaining momentum as evidenced by the growing number of CFS initiatives underway around the country. While this is encouraging, the movement remains in its infancy and the approach needs strengthening. Nevertheless, progress that has been made provides very useful methods, tools, and experiences.

The CFS approach can be viewed as an important complement to the anti-hunger approach which defines food insecurity primarily as a problem of insufficient income, supply and quality of food at the
household level. The anti-hunger approach seeks to ensure that sufficient supplies of nutritionally adequate food are available to limited-income populations primarily through emergency, charitable, and public assistance programs. The anti-hunger approach meets immediate needs with tangible solutions.

In summary, while the two approaches to food security are different, they are not incompatible. As long as there is poverty in our society, ensuring food security requires that the poor continue to be eligible for and participate in the nutritional safety net and that public programs be augmented, eventually phased-out, and replaced with sustainable market- and community-based collaborations. Until the nation has a food system that ensures the food security of all families and communities, both anti-hunger and CFS approaches are necessary.
### Definition of Food Security and Insecurity

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<tr>
<th>Source</th>
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Appendix B: US Poverty Measure

The U.S. measure of poverty is an important social indicator that affects not only public perceptions of well-being, but also public policies and programs. The current measure was originally developed in the early 1960’s by Mollie Orshansky, an economist working for the Social Security Administration (SSA), as an indicator of the number and proportion of people with adequate family incomes for needed consumption of food and other goods and services. The current poverty measure has a set of lines, or thresholds, that are compared with families’ resources to determine whether or not they are poor. The thresholds differ by the number of adults and children in a family and for some family types, by the age of the family head. The resources are families’ annual before-tax money income (Citro, 1995).

When created in 1963, the U.S. poverty levels were based on dietary cost. In the 1960’s the average household spent roughly one-third of its total monthly expenditures for food (averaged over all households at all income levels). In principle, this implied that multiplying the average cost to households of a minimally nutritious diet by a factor of three would provide an indication of the poverty threshold, or the minimum amount of income needed to meet basic needs. Using the cost of the USDA’s Thrifty Food Plan for different size families as estimates of the costs of minimally adequate diets, the poverty thresholds were obtained by multiplying these dollar values by three. This remains the basis of poverty measurement in the U.S. today (Cook, 2002, Citro, 1995).

The official poverty measure has important effects, both direct and indirect, on government policies and programs. It influences policy-making broadly as an indicator of economic well-being. The poverty measure also plays a role in determining eligibility for a number of specific government assistance programs for limited-income people and, more generally, the effects of government policies and economic growth on the distribution of income. The purpose of the measure is to provide an accurate picture of trends over time and of differences among groups, such as children, the elderly, minorities, working people, people receiving government assistance, people in cities, and people in rural areas.

Although the thresholds have been updated annually for inflation since 1963, they have never been revised to reflect the change in proportion of total household expenditures spent for food (Cook, 2002). The panel on Poverty and Family Assistance, having evaluated the current measure, concludes that it needs to be revised to reflect more accurately the trends in poverty over time and the differences in poverty across
population groups. The current poverty thresholds understate the costs of basic needs, and therefore lead to underestimation of the level and proportion of the U.S. population at risk for health issues associated with poverty (Citro, 1995).

### Appendix C: Community Food Security Initiatives

- **Direct Food Marketing**
  - Farm-to-School
    - Center for Food and Justice, Urban and Environmental Policy Institute, Occidental College
      - [www.uepi.oxy.edu/cfj](http://www.uepi.oxy.edu/cfj)
    - Community Food Security Coalition [www.foodsecurity.org](http://www.foodsecurity.org)
    - United States Department of Agriculture Agricultural Marketing Service
      - [www.ams.usda.gov/farmersmarkets](http://www.ams.usda.gov/farmersmarkets)
    - University of California Sustainable Agriculture Research and Education Program
      - [www.sarep.ucdavis.edu](http://www.sarep.ucdavis.edu)
  - Farmers’ Markets
    - Community Food Security Coalition [www.foodsecurity.org](http://www.foodsecurity.org)
    - Community Alliance with Family Farmers [www.caff.org](http://www.caff.org)
    - Farmers’ Market Federation of New York [www.nyfarmersmarket.com](http://www.nyfarmersmarket.com)
    - The Food Trust [www.thefoodtrust.org](http://www.thefoodtrust.org)
    - Farmers’ Markets of Southern California [www.farmernet.com](http://www.farmernet.com)
    - Local Harvest [www.LocalHarvest.org](http://www.LocalHarvest.org)
    - Pike Place Market Farm Program [www.pikeplacemarket.org](http://www.pikeplacemarket.org)
    - Santa Monica Certified Farmers’ Market [www.farmersmarket.santa-monica.org](http://www.farmersmarket.santa-monica.org)
    - Sustainable Communities Network [www.sustainable.org/economy/agriculture.html](http://www.sustainable.org/economy/agriculture.html)
    - Mo’ Better Food Markets [www.mobetterfood.com](http://www.mobetterfood.com)
- Community Supported Agriculture
  - Robyn Van En Center [www.csacenter.org](http://www.csacenter.org)
Alternative Farming Information System  www.nal.usda.gov/afsic/csa
CSA of North America  www.umass.edu/umext/csa
Sustainable Agriculture Research and Education  www.sare.org/csa/states.htm

Hybrid Farmers' Market and CSA
Farm Fresh Choice  www.ecologycenter.org/ffc

Roadside Farm Stands
County Agricultural Development Council  www.chesco.org/planning/pdf/farmmktspdf
New Hampshire Farm Stand Directory  www.nhdirectory.com/NHFarmStands.html
Louisiana Approved FMNP Roadside Stands  www.ldaf.state.la.us/divisions/marketing/fmnp/roadsidestands/Road

U-Pick or Pick Your Own Operations
Pick Your Own Farms  www.geocities.com/p_taggett/upick.html
UPICK.COM & PYO.NET  http://vmarkets.com/vms_upick.cfm
Are We There Yet Pick Your Own  www.fieldtrip.com/nj/pyo-njs.htm

Agritourism
General
University of California-Davis Small Farms Center  www.sfc.ucdavis.edu/agritourism/database/
Ag Innovation Center  www.aginnovationcenter.org/resources/agritourism.shtml

Farm Stays
University of California  http://groups.ucanr.org/GIM/Farm_Stays/
Hollister Hill Farm  www.central-vt.com/web/hhfarmbb/
Wildroots Summer Farmstays  www.surethingdesign.com/wildroots/
Work Ranch  www.workranch.com/default.htm
Rural Treats  www.ruraltreats.com/farmstay.html
➢ Farm Field Trips
  ★ Southside Community Land Trust  http://users.ids.net/~sclt/cf_field.htm

➢ Fairs
  ★ Agricultural Roots Fair  www.sagecenter.org

➢ Festivals
  ★ Harvest Festival On-line  www.harvestfestival.com
  ★ National Apple Harvest Festival  www.appleharvest.com
  ★ Woodland Harvest Festival  www.washingtontourist.com/harvestfestival
  ★ Blue Ridge Harvestfest  www.harvestfest.com
  ★ Grape Harvest Festival  www.ranchochamber.org/test
  ★ Ho Down Harvest Festival  www.eco-farm.org/hoesdown/hoes.html

➢ Harvest Maps
  ★ University of California-Davis Small Farms Center  www.sfc.ucdavis.edu
  ★ Harvest Time in Brentwood  www.harvest4u.com
  ★ Local Harvest  www.localharvest.org
  ★ El Dorado County Farm Trails  www.edc-farmtrails.org/map.html

➢ Other
  ★ Pizza Farm  www.pizzafarm.org
  ★ Cornfield Maze  www.cornfieldmaze.com
  ★ Double T A-cres Ranch  www.eco-farm.org/heartland/heart.html

• Value Added Agriculture
  ➢ General
    ★ Iowa State University  www.extension.iastate.edu/Pages/valag;  www.agmrc.org
    ★ Michigan State University  www.msue.msu.edu/valueadded
    ★ Missouri Department of Agriculture Agriculture Innovation Center  www.aginnovationcenter.org/resources/value.shtml
- **Sustainable Agriculture**
  - General
    - National Campaign for Sustainable Agriculture [www.sustainableagriculture.net](http://www.sustainableagriculture.net)
    - National Sustainable Agriculture Information Service [www.attra.ncat.org](http://www.attra.ncat.org)
    - University of California Sustainable Agriculture Research and Education Program [www.sarep.ucdavis.edu](http://www.sarep.ucdavis.edu)
    - The Food Project [www.thefoodproject.org](http://www.thefoodproject.org)
    - California Sustainable Agriculture Working Group [www.calsawg.org](http://www.calsawg.org)
  - Organic Farms
    - Community Alliance with Family Farmers [www.caff.org](http://www.caff.org)
    - California Certified Organic Farmers [www.ccof.org](http://www.ccof.org)
    - University of California, Santa Cruz Center for Agroecology and Sustainable Food Systems [http://zzyx.ucsc.edu/casfs](http://zzyx.ucsc.edu/casfs)
    - Organic Farming Research Foundation [www.ofrf.org](http://www.ofrf.org)
  - Edible Gardens
    - American Community Gardening Association [www.communitygarden.org](http://www.communitygarden.org)
    - Sustainable Food Center [www.sustainablefoodcenter.org](http://www.sustainablefoodcenter.org)
    - The City Farmer [http://cityfarmer.org](http://cityfarmer.org)
    - The Food Systems Project [www.ecoliteracy.org/pages/foodsystemsproject](http://www.ecoliteracy.org/pages/foodsystemsproject)
    - Community Harvest [www.communityharvestdc.org](http://www.communityharvestdc.org)
    - The Garden Project [www.lansingfoodbank.org/gardenproj.html](http://www.lansingfoodbank.org/gardenproj.html)
    - Grow With Your Neighbors Program [www.metroparks.org](http://www.metroparks.org)
    - Lettuce Link [www.fremontpublic.org/client/moremarra.html](http://www.fremontpublic.org/client/moremarra.html)
    - Making a Garden as a Community Project [www.hort.cornell.edu/gardening/](http://www.hort.cornell.edu/gardening/)
    - P-Patch Community Gardens [www.cityofseattle.net/neighborhoods/ppatch/](http://www.cityofseattle.net/neighborhoods/ppatch/)
    - San Francisco League of Urban Gardeners [www.slug-sf.org/](http://www.slug-sf.org/)
    - Urban Harvest [www.urbanharvest.org](http://www.urbanharvest.org)
    - Denver Urban Gardens [www.dug.org](http://www.dug.org)
• **Urban Farms**
  - City Slicker Farm [www.peoplesgrocery.org](http://www.peoplesgrocery.org)
  - The Urban Farm at Stapleton [www.theurbanfarm.org](http://www.theurbanfarm.org)
  - Jones Valley Urban Farm [www.jvuf.org](http://www.jvuf.org)

• **Entrepreneurial Projects**
  - **General**
    - Center for Community Development [www.udel.edu/CCDFP](http://www.udel.edu/CCDFP)
    - Center for Civic Partnerships [www.civicpartnerships.org](http://www.civicpartnerships.org)
    - First Nations Development Institute [www.firstnations.org](http://www.firstnations.org)
    - Isles Community Farm Project [www.isles.org](http://www.isles.org)
    - Northeast Neighborhood Alliance [www.nena10.com](http://www.nena10.com)
  - **Cooperatives**
    - University of California Center for Cooperatives [www.cooperatives.ucdavis.edu](http://www.cooperatives.ucdavis.edu)
  - **Community Kitchens**
    - Sodexho [www.stop-hunger.org/com_community_k.asp](http://www.stop-hunger.org/com_community_k.asp)
    - America’s Second Harvest [www.secondharvest.org/aboutash/community_kitchens.html](http://www.secondharvest.org/aboutash/community_kitchens.html)
    - Vancouver Community Kitchen Project [www.communitykitchens.ca](http://www.communitykitchens.ca)
    - American School Food Service Association [www.asfsa.org/morethanschoolmeals/communitykitchens](http://www.asfsa.org/morethanschoolmeals/communitykitchens)
  - **Grocery Stores**
    - California Food Policy Advocates [www.cfpa.com](http://www.cfpa.com)
    - The Boston Consulting Group/The Initiative for a Competitive Inner City [www.icic.org](http://www.icic.org)
    - Gateway Foods, West Oakland, CA
    - Inner City Foods, Oakland, CA
    - The People’s Grocery [www.peoplesgrocery.org](http://www.peoplesgrocery.org)
    - University of Connecticut Food Marketing Policy Center [www.fmpec.uconn.edu](http://www.fmpec.uconn.edu)
    - University of California Sustainable Agriculture Research and Education Program [www.sarep.ucdavis.edu](http://www.sarep.ucdavis.edu)
    - The Food Trust [www.thefoodtrust.org/supermarket.html](http://www.thefoodtrust.org/supermarket.html)
Preparing, Packaging, and Selling Food
★ Fruit Carts in the San Antonio District

Job Training Programs
★ Building Opportunities for Self Sufficiency www.self-sufficiency.org

Providing a Product or Service for a Profit
★ Food from the Hood www.foodfromthehood.com
★ Homeless Garden Project www.infopoint.com/sc/orgs/garden

**Nutrition Education and Outreach Programs**

★ General
★ Food Research and Action Center www.frac.org
★ Community Wellness & Prevention Program of Contra Costa Health Services www.ccprevention.org
★ Edible Connections: Changing the Way We Talk About Food, Farm, and Community agexted.cas.psu.edu/faculty/EdibleConnections.html

**Transportation**

★ General
★ University of California Transportation Center www.uctc.net
★ Community Food Security Coalition www.foodsecurity.org
★ Occidental College http://departments.oxy.edu/uepi/cfj/resources/TransportationAndFood.htm
★ Hartford Food System www.hartfordfood.org

★ Supermarket Shuttle
★ University of California-Davis http://news.ucdmc.ucdavis.edu/grocery_gap.html
★ Numero Uno Market, Los Angeles, CA
★ Gateway Foods, West Oakland, CA

★ Farmers’ Market Shuttle
★ USDA Seniors Farmers Market Nutrition Pilot Program www.fns.usda.gov/wic
Bus Lines

- Austin/Travis County Food Policy Council/Austin's Sustainable Food Center
  www.sustainablefoodcenter.org
- City of Miami www.ci.miami.fl.us

Environmental Conservation

- General
  - The Wildlands Project www.wild-earth.org/

- Farmland Preservation
  - American Farmland Trust www.farmland.org
  - United States Environmental Protection Agency www.epa.gov/region5/sprawl/farmland.htm

- Greenbelts
  - Greenbelt Alliance www.greenbelt.org/
  - Sonoma County Agricultural Preservation and Open Space District
    www.sonomacounty.org/opensp/Greenbelt-feature.htm
  - University of Michigan www.umich.edu/~nppcpub/resources/compendia/AGRIpdfs/AGRIfg.pdf

- Agricultural Land Trusts
  - Trust for Public Land www.tpl.org/
  - Land Trust Alliance www.lta.org/
  - American Land Conservancy www.alcnet.org
  - The Nature Conservancy www.tnc.org
  - Marin Agricultural Land Trust www.malt.org
  - Penninsula Open Space Trust www.openspacetrust.org/

- Conservation Easements
  - Minnesota Land Trust www.mnland.org
  - The Land Trust Alliance www.lta.org/conserve/easement.htm
• Urban and City Planning
  ★ Institute of Urban and Regional Development http://www-iurd.ced.berkeley.edu/

• Training
  ★ Alternative Farming System Information Center www.nal.usda.gov/afsic
  ★ University of California, Santa Cruz Center for Agroecology and Sustainable Food Systems http://zzyx.ucsc.edu/casfs

• Food Policy Councils
  ★ General
  ★ Institute for Food and Development Policy/Food First http://foodfirst.org
  ★ State Food Policy Councils www.statefoodpolicy.org
  ★ California Food Policy Advocates www.cfpa.net
  ★ Community Food Security Coalition www.foodsecurity.org
  ★ The Berkeley Food Policy Council www.berkelyfood.org
  ★ The Hartford Food System www.hartfordfood.org
  ★ Austin Food Policy Council/Sustainable Food Center, Austin, TX http://www.sustainablefoodcenter.org
  ★ The Iowa Local Food Systems Policy Council www.islocalfood.org
  ★ Marin County Food Policy Council www.slideranch.org
  ★ Toronto Food Policy Council www.city.toronto.on.ca
  ★ Tahoma Food System www.tahomafoodsystem.org
  ★ Pennsylvania Hunger action Center www.pahunger.org
  ★ Connecticut Food Policy Council http://foodpc.state.ct.us

• Food Gleaning and Food Recovery
  ★ General
  ★ United States Department of Agriculture Economic Research Service
★ Michigan State University www.msue.msu.edu/fnh/hunger/factsheet/glean.htm
★ Cornell University www.cals.cornell.edu/agfoodcommunity/afs_temp2.cfm?topicID=79
★ America’s Second Harvest www.secondharvest.org
★ Farm Share www.Farmshare.org
★ Congressional Hunger Center http://hungercenter.org


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