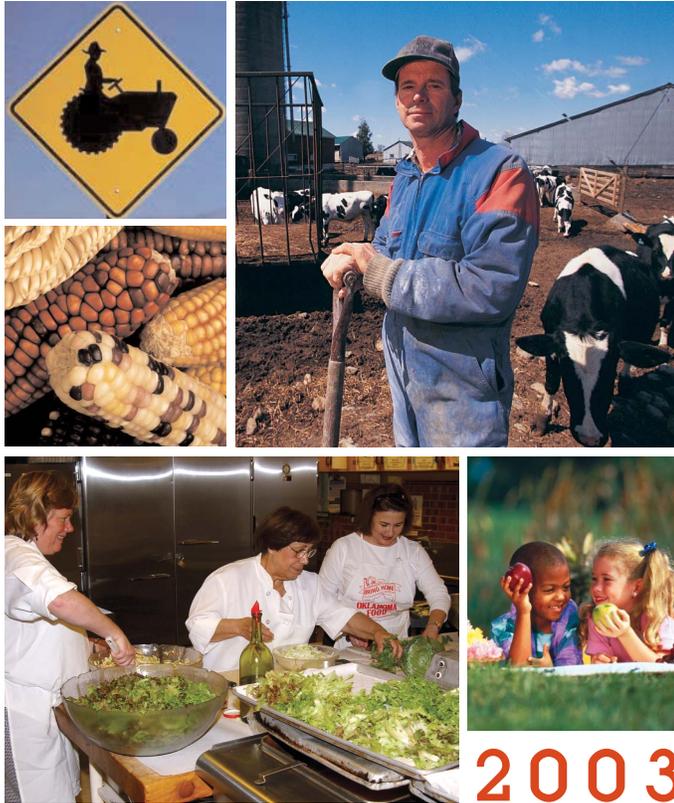


THE OKLAHOMA  
**FARM-TO-SCHOOL**  
REPORT



**Including the Oklahoma  
Institutional Food Service Survey**



**THE OKLAHOMA FOOD POLICY COUNCIL**

*A joint project of the Kerr Center for Sustainable Agriculture  
and the Oklahoma Department of Agriculture, Food, and Forestry  
in partnership with the USDA Risk Management Agency*

# The Oklahoma Farm-to-School Report 2003

Including the *Oklahoma Institutional Food Service Survey*

The Oklahoma Food Policy Council

A joint project of the Kerr Center for Sustainable Agriculture  
the Oklahoma Department of Agriculture, Food, and Forestry, and Drake University  
in partnership with the USDA Risk Management Agency

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Policy Council/Kerr  
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Agriculture

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Thanks to  
Ken Biddle, Oklahoma  
Department of  
Agriculture, Food,  
and Forestry, for  
back cover photo  
and cover photo  
of salad preparation  
for a Food Policy  
Council meeting at  
Casady School,  
Oklahoma City.

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# Preface

The Oklahoma Food Policy Council is a joint project of the Kerr Center for Sustainable Agriculture and the Oklahoma Department of Agriculture, Food, and Forestry and Drake University, in partnership with the USDA Risk Management Agency.

It is an unusual group, composed of a broad base of individuals and organizations interested in encouraging the use of local foods as a way to improve nutrition in our school system, revitalize rural communities, and restore profitability to farmers interested in this segment of the market. While there are many other issues in which the council is interested, we chose to explore these because they seemed to be areas that were timely and where this group could have an impact.

To better understand the food purchasing behavior of our public schools, we surveyed 638 public institutions (including colleges and universities, technology centers, prisons, state hospitals, and state resorts). The overall response rate was high (66.8%), especially from public schools. As you will see in the data, food managers have a significant interest in this area and that many of the perceived obstacles could be solved by education. The Council, through partnerships, will work on educational gaps identified in the survey.

Although Oklahoma is a farm state, the disconnect between what we grow and what we eat is growing. Many people in our increasingly urbanized state do not know what Oklahoma farmers grow and do not know whether the food they purchase has been produced in the state. Studies in other Midwestern states have indicated that most of the food dollars spent there flow elsewhere and do not benefit local food producers. It seems likely that in Oklahoma, too, very little of the food bought and consumed here is actually grown here.

The route our food takes from farm to table is a long, circuitous one. The result: very few of the food dollars spent by Oklahoma consumers each year goes to Oklahoma farmers.

It is becoming increasingly clear that the state of children's health is a problem in Oklahoma, indeed, nationwide. Choices of food in our school system vary a great deal, however, the trend to convenience and fast food is causing alarm. Could it be that diet contributes to health and behavioral problems in our children? Obesity is a major problem and experts warn us about increases in health-related diseases such as diabetes among school children. Excitability, inability to concentrate and low achievement in the classroom have been linked to poor diets at home and, sadly, at school.

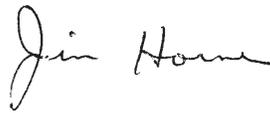
One way to keep food dollars at home and also improve our kids' diets would be to offer Oklahoma students fresh, tasty, locally grown food. However, we know that

One way to keep food dollars at home and also improve our kids' diets would be to offer Oklahoma students fresh, tasty, locally grown food.

food service budgets are tight and that there may not be adequate labor to process local food in many schools. Therefore, the council is interested in developing a mechanism that will not put additional burdens on the school food service system. We must find ways to process, prepare, and package local foods and then ensure convenience in ordering.

In order to facilitate connections with Oklahoma institutions and Oklahoma farmers, the Food Policy Council (utilizing the research of intern Shawn Campbell) has prepared the first edition of a directory which includes a list of farms interested in selling to institutions and what they grow, a harvest calendar and list of produce grown in Oklahoma, and a list of institutional food managers who may want to buy locally. The directory is available by mail and online at [www.kerrcenter.com](http://www.kerrcenter.com). It will be updated periodically.

It is our hope that this study and other efforts will help us bring Oklahoma food to Oklahoma tables. Our children, farmers, and communities will benefit—it is the right thing to do.

A handwritten signature in cursive script that reads "Jim Horne".

James E. Horne, PhD  
Co-chair, Oklahoma Food Policy Council  
President and CEO, Kerr Center

# The Oklahoma Food Policy Council Fact Sheet

## What is the Oklahoma Food Policy Council?

It is a group that advises the Oklahoma Commissioner of Agriculture on food policy. It is a joint project of the Kerr Center for Sustainable Agriculture and the Oklahoma Department of Agriculture, Food, and Forestry (ODAFF). The group meets periodically in Oklahoma City.

For a list of Food Policy Council members, see p. 36

## What exactly is a food policy?

It is any decision made (or not made) by a government or institution, which shapes the type and cost of foods used or available, influences the opportunities for farmers and employees, or affects the food choices available to consumers.

## Do other states have food policy councils?

Such councils have been established in six states. The first was established in Iowa in 2001, with Drake University agricultural law professor Neil Hamilton as its chair. Since then, Hamilton and Drake have assisted in the creation of food policy councils, in Connecticut, North Carolina, Utah, New Mexico, and Oklahoma. The support of the Risk Management Agency (RMA) of the US Department of Agriculture has helped make the formation of these councils possible.

## Who are the members of the Oklahoma Food Policy Council?

Fifteen Oklahomans representing diverse groups with an interest in Oklahoma's food system make up the council. Current members represent farming and ranching, food processing, retail foods, education, and the media; as well as tribal, conservation, religious, and anti-hunger organizations. Key staff from the ODAFF and the Kerr Center assist members.

## When was it established?

The council was established on October 16, 2001, by then Agriculture Commissioner Dennis Howard at the Kerr Center's *Bringing in the Sheaves* symposium on hunger, farming and the fairness of the American food system. The council enjoys continuing support from Commissioner/Secretary of Agriculture Terry Peach.

## Why was it established?

- To broaden the discussion of issues beyond simply agricultural production to a more comprehensive, food system-wide examination
- To provide an opportunity for a focused examination of how state and local government actions shape the food system
- To create a forum in which people involved in all different parts of the food

system and government can meet to learn more about what each one does and to consider how their actions impact other parts of the system.

- To improve the nutrition and the provision of nutritional information throughout Oklahoma
- To create an infrastructure within the food system which will better connect stakeholders such as food producers, consumers, communities, food processors, marketers, and government agencies, including those agencies which may also be consumers
- To improve the economic status of Oklahomans involved in the food system by creating new opportunities, increasing profitability and ensuring that food dollars stay close to home through local processing, enhanced distribution, direct marketing, diversification of products, and distribution of information regarding presently under-utilized opportunities.

### **What can a food policy council do that is not already being done somewhere is government?**

- A food policy council can bring to the table a broader array of interests and voices, many of which are not typically asked to be involved when farm and agriculture policy is discussed
- A food policy council can examine issues— such as hunger in the state, the nutritional well being of citizens, and how to increase purchases of locally grown food— with fresh eyes.
- An FPC can employ a more comprehensive approach to analyzing issues, which recognizes the interrelation between different parts of the food system and the need to coordinate and integrate action if policy goals are to be achieved.

### **What has the Oklahoma food policy council accomplished so far?**

For its first project, the council examined the potential for increasing the amount of Oklahoma grown and/or processed foods purchased by public institutions in the state. A survey of institutional food service directors was devised and mailed to 638 institutions in the following categories: public schools (85%), colleges and universities (5%), correctional centers and state hospitals (6%), technology centers (2%), and state resorts (1%).

This report contains a full analysis of the answers as well as an examination of the importance of increasing local consumption of locally produced foods. In addition, a Farm-to-School directory has been completed which contains information about Oklahoma food producers and what they grow, along with information about farmers markets, schools interested in buying locally, and a harvest calendar.

*Thanks to the Iowa Food Policy Council for some of the information in this fact sheet.*

# Bringing Oklahoma Food to Oklahoma Tables

## *Why Building a Viable Local Food Economy Makes Sense*

Maura McDermott, ad hoc member, Oklahoma Food Policy Council

The 2003 *Farm-to-School Report* is the result of almost two year's worth of work done by the Oklahoma Food Policy Advisory Council. The council's mission/motto is "Bringing Oklahoma Food to Oklahoma Tables."

This report addresses three important contemporary issues: the economic viability of the family farms that have traditionally been the backbone of the state; the security of our food supply; and last, but not least, the health of our citizens, especially our children.

When establishing the council in October 2001, the Oklahoma Commissioner of Agriculture emphasized the importance of food security in our communities— meaning that all Oklahomans should have access to a healthy, safe and abundant food supply. Since the terrorist attacks of September 11, 2001, security in all its aspects, including the safety and security of our food supply has taken on a new urgency

Our food system has evolved from one in which most cities were surrounded by farms which supplied them with produce and dairy products to one in which urban sprawl and the concentration of food production in select areas of the country have virtually eliminated the near-urban food supply. Today, analysts say that most major cities have a limited amount of food available close at hand. In the U.S. the typical 'fresh' food item is typically hauled an average of 1500 to 2500 miles from farmer to consumer, 25 per cent farther than in 1980. (Distances are much greater for imported foods, such as grapes from Chile.)

It can take a week for food to travel from coast to coast. Such a long-distance food system is at risk from attack or disruption, from problems with the supply of oil, and is very costly in amount of petroleum consumed.

Bringing Oklahoma food to Oklahoma tables; i.e., increasing consumption of Oklahoma-grown food is an important step in decreasing that mileage and ensuring our citizens continue to have an uninterrupted supply of food. Rebuilding such a "local food system" (or economy) could also revitalize the Oklahoma farm economy.

We define a "local food system" as a system where there are adequate opportunities and adequate infrastructure for food producers to sell their goods to local people and institutions. Helping identify those opportunities and build that infrastructure is an important aspect of the mission of the Oklahoma Food Policy Council.

It can take a week for food to travel from coast to coast. Such a long-distance food system is at risk from attack or disruption

The farmer's share of the food dollar is now on average less than seventeen cents and is much less for many individual food items.

The matter is urgent. In Oklahoma and indeed everywhere around the nation, the small and medium sized, independent family farm continues to be in crisis. According to the USDA's *Small Farm Commission Report*, "the steady decline of the viability of the small farm economy has negatively impacted the health of our environment, farm workers and communities. Local patterns of production, distribution and consumption of food are increasingly replaced by global operations and interests. Small and medium farmers are regularly squeezed out of business by high input costs, low prices for their products, and poor access to markets. Agribusiness mergers and consolidations result in the loss of market competition and fair market access for independent farmers."

No wonder then that in a recent MSN web article on career choices, farming was #1 on the list of dead-end occupations.

Oklahoma is traditionally an agricultural state and about 38 per cent of Oklahoma's population still lives in non-metropolitan areas. Our state song proclaims, "We know we belong to the land..." But do we? Oklahoma's 86,000 farms contribute about 4.6 billion dollars annually to the Oklahoma economy.

While this is impressive on a macro-scale, at the farm level it is not so impressive. In Oklahoma, each farms makes on average less than \$3,759 after expenses. The farmer's share of the food dollar is now on average less than seventeen cents and is much less for many individual food items.

This state of affairs goes largely unnoticed by the urban population because people are by and large alienated from farming and their food. Without country-of-origin labeling, many people do not know where their food comes from, much less the ins and outs of agricultural production. They certainly would have difficulty calculating how much of the food their grocery carts was grown or processed in Oklahoma.

The collapse of the farm economy has widespread consequences. In rural towns, businesses, schools and churches shut down. Once-thriving communities become ghost towns with boarded up windows on run-down Main Streets. Anyone who has driven through Oklahoma knows this, and for those who grew up in those towns, the sight can be disheartening.

Rural people who once would have been gainfully employed in agriculture are now faced with few opportunities in their areas for decent-paying jobs. Persistent poverty is the result. In 1999 half of the nation's twenty lowest income countries, were farm and ranch counties in Nebraska and the Dakotas. This pattern holds true in Oklahoma. Poverty rates in non-metro Oklahoma (17.5%) are significantly higher than in metropolitan Oklahoma (12.9%).

Too often this means hunger in the land of plenty, despite the fact that most of the rural poor are working. Almost 12 per cent of Oklahoma households are food insecure, which is defined as: "limited or uncertain access to

nutritious, safe foods; households that experience food insecurity have reduced quality or variety of meals and may have irregular food intake." Over four percent of Oklahomans experience hunger.

In Oklahoma while the wheat grows and calves fatten on the land all around them, over 200 churches and other groups distribute food in rural western and central Oklahoma, through the Oklahoma Regional Food Bank in Oklahoma City.

While the consequences of this rural poverty are most severely felt in rural areas, people in urban areas are not unaffected. All taxpayers bear the cost of government programs to help the poor and try to repair the social problems engendered by poverty. While most would agree it is worthwhile to build more economically viable rural communities, it is sometimes unclear how to go about it. With 7.5 percent of Oklahomans engaged in farming or farming related jobs, it makes sense to start by regenerating Oklahoma's agricultural economy.

The question is: How to do it? One way is to "think local." The Small Farm Commission endorsed this idea, recommending that the USDA "...promote and foster local and regional food systems featuring farmers markets, community gardens, CSAs, and direct marketing to school lunch programs" as a way to revitalize America's small farms.

The Oklahoma Food Policy Council took up this challenge and as its first project set out to examine the potential for increasing the amount of locally grown foods purchased by public institutions in the state. In order to learn the buying habits of institutional food service directors in the state, a survey was devised and mailed to 638 institutions: public schools, colleges and universities, correctional centers and state hospitals, technology centers, and state resorts.

The response to this survey was very good, nearly 67%. It is clear from the responses given that while not much Oklahoma-grown food is currently used, many institutions have a high level of interest in buying it. The analysis of survey results, done by Oklahoma State University agricultural economics professor Dr. Larry Sanders and graduate student Tihomir Ancev, is included in this publication.

### **Be A Local Hero: Buy Oklahoma Grown**

Oklahoma's top agricultural commodity is beef cattle; other major crops are wheat, hogs, broilers, dairy, cotton, soybeans, and feed crops. Oklahoma farms also grow a large variety of vegetable, fruit, and nut crops (For example, 51, 450 acres of nineteen different kinds of vegetables according to USDA figures), although most of these are not grown on a large scale.

This does not mean that these types of crops do not grow well here. A variety of factors affect what crops are planted and harvested, including

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#### *SURVEY SAYS*

#### **TOP FIVE MOTIVATIONS**

to Buy Local

- Ability to buy small quantities
- Helping Oklahoma farms/businesses
- Higher quality food
- Access to fresher food
- Support the local economy

## SURVEY SAYS

Over half of food service managers would be interested in connecting with local food producers; 73% of large school systems

## SURVEY SAYS

### **POSSIBLE LOCAL FOOD PURCHASES**

*(from most interest to least)*

- Tomatoes
- Cucumbers
- Onions
- Lettuce
- Eggs
- Potatoes
- Melons
- Strawberries
- Ground Beef
- Cheese
- Dairy Products

availability of a viable market.

Where are those markets? Perhaps they are right here in Oklahoma. The same MSN article that named farming as number 1 on a list of dead end occupations also noted growing opportunities in niche or alternative agriculture, offering some hope to those who want to work the land. This niche agriculture often involves direct sales.

A growing number of farmers in Oklahoma are aware of this and are interested in diversifying their farms and trying alternative marketing strategies. One indication: In a survey conducted by the Kerr Center in 2000, Oklahoma cattle ranchers who replied overwhelmingly indicated they would be interested in, or possibly interested in, alternative ways (other than through the sale barn) to market their cattle. Attendance is very high at Kerr Center-sponsored conferences and workshops on alternative crops and direct sales.

One popular place for farmers and consumers to connect directly is at farmers markets. In 2001, sales at nine Oklahoma farmers market in the state were estimated at \$1.3 million. Six new markets opened in 2002, bringing the total to 26. Some markets, such as OSU/OKC and Muskogee have experienced big growth rates from year to year. The markets' offerings run the gamut of fruits, vegetables, herbs, nuts, and even meat and dairy. Many markets emphasize that their offerings are grown in Oklahoma.

In a recent survey, customers at eleven Oklahoma markets cited "product quality" as a characteristic they deemed very important when shopping for fresh produce. Other factors that were very important included the availability of in-season produce and unusual varieties to choose from, and the knowledge that the food was grown in Oklahoma and grown by the vendor. (To view findings, go to [kerrcenter.com](http://kerrcenter.com).)

Recently, researchers looking into the effectiveness of media promotions of the Made In Oklahoma program found that respondents were more likely to buy a Made in Oklahoma product by a 2 to 1 margin. "Made here at home, better quality, and fresher" were some of the top reasons people gave. (415 Oklahoma companies participate in the Made In Oklahoma marketing and promotion program. The Oklahoma Dept. of Agriculture, Food and Forestry established the program in 1986.)

Oklahoma's fertile soil can grow a cornucopia of crops. People in Oklahoma are raising everything from asparagus to zucchini. What they need are opportunities to market their products and have consumers appreciate the diversity and quality of Oklahoma-grown food.

### **Farm to School Notebook**

Farm to school (or farm to cafeteria) programs connect farmers and school cafeterias in a direct way. Farmers, or more often, farmers' groups grow specific food items to sell to schools. Farmers themselves, private

companies or groups, or government entities (such as the Department of Defense Fresh Produce Program) help in various capacities to distribute the produce to the schools that want it.

Both schools and small farmers benefit from these efforts. Schools provide children fresh, tasty nutritious produce while small farmers acquire new markets. Schools are able to provide fresh produce quickly and with lower transportation costs by buying it from small farmers instead of from distant markets. While fresh fruits and vegetables are often the mainstays of such programs, other locally-raised farm products such as dairy, eggs, nuts, meat, even breads and other locally-processed products could also be sold to schools.

Spurred by USDA initiatives and facilitated by state efforts (such as food policy councils) and action at the grass roots, such programs are gaining in popularity. Farmers are forming cooperatives or alliances in order to provide the products schools desire. Already existing farmer groups such as farm market growers or commodity organizations are taking advantage of the opportunity to sell to schools. Parents and food activists are also involved in challenging their school systems to get involved.

According to the New York Times in January of 2003, school districts in 17 states have signed contracts with small local farms in farm to school programs. The potential is huge: four billion dollars are spent on school

<b>FARM-TO-SCHOOL– SELECTED EXAMPLES</b>	
<b>HARTFORD SCHOOL SYSTEM</b>	
Farm Fresh Start	
<b>Initial Support:</b> Grant from Northeast SARE	<b>Distribution:</b> a local food wholesaler acted as middleman between farmers and schools, and helped facilitate produce being provided in the desired form (cut, peeled, shredded, etc) for the food services staff.
<b>Partners:</b> Hartford Public School Food Service, local farmers, the Connecticut Dept. of Agriculture, the University of Connecticut Dept. of Nutrition	<b>Buying procedures:</b> bidding, lowest bid gets contract.
<b>Year begun:</b> 1994-95 pilot, expanded 1996	<b>Unique aspects:</b> pilot nutrition education (67 classes and events for almost 600 students including farm visits and cooking lessons) .
<b>Schools participating:</b> 1996: 705 student elementary school 1262 student middle school, 962 student middle school	At end of class the percentage of students who could recall the names of five local fruits or vegetables went up from 15.8 to 77.8 %. Also integrated African American cuisine into the study of Black culture and history.
<b>Main Months</b> September to mid November, less in spring	"The most important accomplishment of Project Farm Fresh Start has been winning the commitment of Hartford's school food services to make locally grown produce a regular feature of their lunchtime menus."
<b>Food bought:</b> 1996– 19,800 lbs of locally grown produce, 80% fruit (by weight) 70% of the district's fresh produce purchases Items purchased: apples, pears, tomatoes, and romaine lettuce	Contact Liz Wheeler, project director 860-296-9325

SURVEY SAYS

**PAST LOCAL FOOD PURCHASES IN OKLAHOMA SCHOOLS**

25 % of responding institutions have purchased foods from a local producer in the past year. Items bought include (from most to least):

- MELONS
- ONIONS
- CHEESE
- PORK
- CUCUMBERS
- GROUND BEEF
- DAIRY PRODUCTS
- TOMATOES

lunches every year in the US; ten billion on federal school nutrition programs including breakfast and lunch and snacks provided free or at a discount.

Farmers are just beginning to tap into that potential. One example is North Carolina, where the farm-to-school purchases in 2002 totaled \$289,057.83.

Both schools and small farmers benefit from their participation in farm-to-school initiatives, says the USDA. Schools provide children fresh, tasty nutritious produce while small farmers acquire new markets. Schools are able to provide fresh produce quickly and with lower transportation costs by buying it from small farmers instead of from distant markets. Farmers find a new, profitable market.

In order to make a farm-to-school program successful, farmers must be ready to supply what schools need. According to Ken Wilmoth, a Department of Defense produce buyer who has helped to set up farm to school programs in North Carolina, Mississippi, and Alabama, farmers can adjust when and what they plant in order to better match school calendars. He cites the example of Mississippi farmers making mid-summer (in addition to normal springtime) plantings of melons in order to harvest them during the fall school term.

On the other side of the equation, school officials must have a genuine commitment to placing local produce on their menus to make such

**FARM-TO-SCHOOL– SELECTED EXAMPLES  
NORTH CAROLINA**

**Year begun:** 1998-99

**Initial support:** State of North Carolina provided money for 50 schools with \$1000 grants to make purchases from NC farmers; \$500 the second year.

**Items purchased:** In 2002: strawberries, pumpkins, blueberries, watermelons, cantaloupes, apples, cabbage, broccoli crowns, sweet potatoes, sweet potato chips, tomatoes. Worth \$289,057.83 (Gary Gay, personal communication)

**Unique aspects:** Government involvement: USDA, Department of Defense, and major support by North Carolina Dept of Agriculture and Consumer Services.

North Carolina Dept of Agriculture and Consumer Services administers the program; provides warehouse and trucks for produce pickup. Department of Defense Fresh Produce procurement program is also involved in coordination of

program. This DoD participation allows school districts to purchase fresh local produce with federal commodity money. Farmers benefit by being able to sell large quantities without incurring delivery costs. (Sanger)

A Town Hall meeting was held to bring together potential partners in farm to school projects to learn about the benefits of such programs.

**Contact:** Gary Gay, Director, Food Distribution System 919.575.4490 or Gary.Gay@ncmail.net

**Schools participating:** 54 in 2000  
"Ultimately, the North Carolina experience points to the critical role that public agencies can play in addressing key barriers and facilitating crucial components of a farm-to-school approach." (Azuma and Fisher)

programs work. The availability of competitively priced quality locally-grown food, incentives from school boards and other public entities, and parental support, can help school officials adopt such programs.

In many farm to school programs, featuring locally-grown produce on school menus is just one aspect of a larger focus on nutrition education. In such comprehensive programs, children learn how to eat in a healthy way, and learn how their food is grown from farmers visiting the classroom or during field trips to the farm, thereby experiencing first hand the value and appeal of fresh fruits and vegetables. School gardens too add hands-on learning experiences and appreciation for locally grown. Such programs, many feel, are key to improving the eating habits of today's kids.

### Healthier Farms and Families

Doing what it can to improve the health of Oklahoma's schoolchildren and their access to nutritious food and nutritional information is a key part of the mission of the Oklahoma Food Policy Council.

The health of many of Oklahoma's children is declining. According to the USDA, 19.3 percent of children in Oklahoma are overweight (compared to 16.1 percent nationally). This is not surprising given that during the past decade the percentage of overweight Oklahomans of all ages has steadily increased. As the Oklahoma State Board of Health said in its 2002 State of the State's Health Report, "For our youth the increase has been appropriately called an epidemic."

Obesity contributes to many serious health conditions over the course of a person's lifetime, beginning in youth. Obesity contributes significantly to diabetes, heart disease, stroke, arthritis, certain cancers and other chronic diseases and conditions. Oklahoma has higher rates of death from chronic diseases compared to the rest of the nation, and the health of the adult working population has been called "relatively poor."

Reflecting these facts, our state's health ranking has steadily declined, moving us from 33rd of the 50 states to 42nd.

#### FARM-TO-SCHOOL- SELECTED EXAMPLES

##### University of Madison, Wisconsin

Locally and/or sustainably grown foods featured at UW-Madison cafeterias all year long

Foods served include pasture-raised beef and chickens, organic vegetables and organic dairy products

Buys from individual farmers and increasingly, because of convenience, farmer cooperatives

Reversing these trends will be a challenge. It is common sense, however, to assume that good health begins in childhood and intervention then will set the stage for good health throughout a person's life. The time for change is now. Take just one disease: according to the U.S. Center for Disease Control and Prevention, one in three US children born in 2000 will become diabetic unless

#### SURVEY SAYS

#### CONCERNS ABOUT PURCHASING LOCALLY GROWN FOOD

- Food safety
- Cost
- Supply reliability
- Delivery considerations
- Quality
- Payment arrangements
- Ordering method
- Adequate volume
- Package consistency
- Prime vendor considerations

**TYPES OF INFORMATION HELPFUL IN MAKING LOCAL FOOD PURCHASING DECISIONS**

- Local Food Program Information from Other States
- Local Supplier Lists
- Health and Safety Information on Local Foods
- Regulatory Information
- Assistance in Developing Multiple Source Buying Systems
- Assistance/ Research on Consumer Preferences

children start making serious changes to their lifestyles and eating habits.

Diabetes should be of particular concern in Oklahoma, because of our high population of Native Americans and African Americans, both of whom "show a disproportionate number of diabetes related deaths, twice that of whites," according to the state board of health.

Like children around the U.S., children in Oklahoma are getting fat because they do not get enough exercise and they eat too much of the wrong kinds of foods—foods high in fat and sugars. These poor food choices lead not only to obesity but also to nutrient deficits.

While data on children’s nutrient intake in Oklahoma is not readily available, the situation can be extrapolated from more general data. Fewer than half of Oklahomans meet the recommended daily allowance for several key nutrients: calcium, magnesium, Vitamin A, B6, E, and zinc. Less than 50 percent of Oklahomans meet the daily vegetable, grain, fruit, meat, and dairy serving recommendations. Slightly over 50 per cent get enough Vitamin C and iron. (Oklahoma consistently rates 3-5 per percentage points below national rates.)

Nationally, less than twenty percent of children eat the recommended servings of vegetables and less than 15 per cent eat the recommended servings of fruit.

The problem is big and it is difficult to know where to begin. But because school food programs reach a very large number of our children every day, the USDA, various states, and school systems in many communities around the country have seen them as the ideal place to institute a number of programs to encourage increased consumption of fresh, nutritious produce. In addition to fresh produce, lean meats, grain products and dairy—all foods that Oklahoma farmers and ranchers are good at raising and produce in abundance—are of course crucial elements of a balanced diet for children.

In Oklahoma, about 387,000 of approximately 600,000 schoolchildren (about 61%) participate in the school lunch program. It would seem to be an ideal place to positively impact their nutrition.

However, the situation now is far from ideal. Over a week’s time 86 per cent of the basic school lunches meet the USDA’s nutritional guidelines on paper. But experts point out that children often can choose between the "nutritious meal"

**FARM-TO-SCHOOL—SELECTED EXAMPLES**

**ALL-IOWA MEALS  
IOWA STATE UNIVERSITY**

Iowa producers provide vegetables, meats, poultry, milk and cheese for conferences held at Iowa State University

In 2000— almost \$15,000 went to 46 local growers for 54 conferences serving over 5000 people

Groups meeting at ISU can ask for the local food menu.

Food purchases brokered by the non-profit group, Practical Farmers of Iowa, who charge a fee to farmers, caterer and groups

and items from vending machines. According to a study cited in a New York Times article only 50 per cent choose the nutritious meal. Many of these end up leaving the vegetables uneaten.

Vending machines, which most often offer soda pop and candy to children at school, are coming under fire for contributing to the obesity crisis. However they are a source of revenue for Oklahoma schools. The Muskogee *Phoenix* reported on June 30, 2003, that the Muskogee Public Schools receive \$120,000 in vending profit per year. There is a vending machine in every building in the district.

The same *Phoenix* article revealed that the Tahlequah Public Schools have switched from "profit-focused vending" to "health-smart vending." The district took carbonated drinks out and replaced them with water and juice. It has since lost a significant amount of revenue because of the change, but because of concerns about student health, is sticking with the new machines.

The situation in both Muskogee and Tahlequah begs the questions: will Oklahoma kids raised on a diet of fast foods high in fat and sugar eat other kinds of food? Can the right foods be made available in schools? And if they are, how do we get kids to eat them?

## You Are What You Eat

Proponents of farm to school programs say that that locally grown fresh fruits and vegetables foods are fresher and tastier, and therefore are more appealing to school kids, who will eat them and get the nutrients they need to be attentive and healthy.

Sometimes the fruits and vegetables currently being served are not particularly attractive to children. In one recent report, children observed eating lunch at schools in New York City and Montgomery County, Maryland, only five out of hundreds took a green vegetable with the main course.

A growing number of school districts around the country are demonstrating that it doesn't have to be that way. A case in point: Opelika, Alabama, where children eagerly eat fresh vegetables they like. In a recent New York Times article, Melanie Payne who oversees meals in the school district said, "We figure you have to serve a new food item ten times before the kids actually eat it, but we've had no problem with the fresh sweet potatoes, butter cream peas and black-eyed peas."

Opelika buys from local farmers through a cooperative. Other schools around the country are finding that children will eat nutritious food if it is tasty and the price is right. In Minnesota, a study found that halving the prices of fresh fruits and vegetables caused purchases of baby carrots to double and apples and bananas and oranges increased four fold. In Santa Monica, kids are reportedly racing to the farmers market salad bars.

Students seem to be more aware than their parents on this issue. In a

## SURVEY SAYS

### SALAD BARS IN OKLAHOMA SCHOOLS

- About two-thirds (66.4) of the institutions have salad bars
- Large public schools: 64%
- Mid-sized schools: 77%
- Small schools: 58%
- Other institutions: 62%

## FARM-TO-SCHOOL– SELECTED EXAMPLES

### **NEW NORTH FLORIDA COOPERATIVE FARM-TO-SCHOOL**

**Year begun:** 1997-98

**Partners:** USDA Natural Resources Conservation Service, USDA Agriculture Marketing Service, West Florida Resource Conservation and Development Council and the Small Farmer Outreach Training and Technical Assistance Program at Florida A and M University

**Schools participating:** eight school districts totaling 300,000 students

**Products sold:** 1998-99 Leafy greens, cole slaw, blackberries, muscadine grapes, strawberries

**Unique aspect:** Identified a niche market (fresh, washed, chopped and bagged greens). These were not available through regular distributors. First year the coop donated 3000 pounds of greens to the

school as a sample and gesture of good faith. Coop built a packing/processing shed to cut labor and purchased a refrigerated trailer in order to meet specs of school districts.

*"The New North Florida Cooperative provides fresh, healthy agricultural products at a fair price to local school districts lunch and breakfast programs. The Cooperative is responsible for the marketing, handling, processing, and delivery services of agricultural products produced by participating local small farm operators. The Cooperative will meet the needs of local small farm operators by facilitating the flow of profit from a value-added business operation to and within the local community."*

Mission statement. (Azuma and Fisher)

recent Time/CNN poll, 85 % of student leaders said that schools needed to provide healthier eating options. Sixty nine per cent of parents, on the other hand, believed that the school meals are healthy for their children, though forty-nine percent conceded that they worried about "lack of nutritional content" of the food served at schools.

"Healthier eating options" can make a significant positive impact on student attention and discipline, say teachers at Appleton Central High School in Wisconsin, an alternative school where students are at higher risk for dropping out. Teachers say that improved school lunches introduced five years ago have made a vast difference in reducing behavior problems—and helped them "get through" to their students. As one teacher said in a recent ABC News Report, "They are on task, they are attentive. They can concentrate for longer periods of time."

What do the students at Appleton eat? Meals consist of fresh fruits and vegetables, whole grain breads and entrees free of additives and chemicals, supplied by Natural Ovens and Bakery, a local company. Soda vending machines were replaced with ones offering only juice, water and energy drinks.

Students at the school agree that food does have an impact on their behavior. "I am able to concentrate better," said one student. "Not as tired. More energy."

## FARM-TO-SCHOOL– SELECTED EXAMPLES

### **SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT**

#### **Farmers Market Salad Bar**

**Year begun:** 1997-98

**Partners:** Occidental College Community Food Security Project

**Schools participating:** initially one elementary school for one year. Now district-wide, 15 schools (Santa Monica is a city of 90,000)

**Products sold:** fresh produce from two farmers markets purchased (through advanced orders) twice weekly from farmers selling there. In 1998-99 schools spent \$22,473 on produce

**Unique aspects:** Introduced local produce into existing salad bars in schools

Talked to students about what they didn't like about existing salad bars (not fresh, low choice) and what they do like; also CFS staff person did outreach to parents and kids

Coordinator hired by school system oversees the program. Volunteer parents help prepare food in the cafeterias and monitor student food choices so they adhere to USDA nutritional standards

Percentage of kids in nine elementary schools choosing the salad bar ranged from 12% to 60%; average 37%

Farm tours, farmers market visits, and school gardens raised student awareness of their food

**Costs:** 1998-99: 77 cents for salad bar meal vs. 88 cents for a hot meal

## The Farm to School Survey

Improving the health of our children by making nutritious foods more available and appealing at school is a desirable goal. Another worthy goal is to improve opportunities for Oklahoma farmers, including those running small and medium-sized operations, by exploring new outlets for their products.

Achieving both goals through farm to school programs would seem to be win-win situation for practically everyone. But numerous challenges must be overcome before producers can tap into such a large market and school-children are regularly eating locally grown food.

Until recently, the food served in public institutions in most places around the country has not been locally produced. The food policy council suspected that this also the case in Oklahoma. To find out, the council chose to conduct a survey of 638 institutional food service managers in the state. The purpose was to gauge the level of interest in buying more Oklahoma grown foods, and also to find out what the barriers to establishing "farm-to-school" programs might be.

The response to the survey far exceeded the council's expectations. Almost 67% replied (72.6% from schools), which indicated a high level of interest among food service managers in exploring this topic. The responses to survey questions did indeed bear out this assumption. The survey also supplied council members with much information about their food preferences and purchases.

**BARRIERS THAT CURRENTLY STOP INSTITUTIONS FROM BUYING LOCALLY GROWN**

- Lack of producers from whom to purchase
- Lack of products available during certain times of year
- Safety
- Lack of staffing for prep of large amounts of fresh produce/ uncooked bulk meat
- Budget
- Convenience

"The significant finding of the survey," says Oklahoma State University agricultural economics professor Dr. Larry Sanders, who analyzed the survey results, "is that a majority of these institutions would be willing to make such purchases [of locally-grown foods] if institutional practices and policies supported such decisions."

Two-thirds agreed that they would buy locally-grown if price and quality were competitive and a source was available. About half said they would be interested in contacting local food producers, and many of those provided the council with contact information.

While there are a number of barriers to such purchases, Sanders concludes, "public and private responses can be made to most of these barriers...."

Council members were encouraged by these responses. However, since they also learned that current purchases of local food are low, it became clear that that it will take much effort to make consumption of Oklahoma-grown and processed food in our schools the norm, rather than the exception. The dedication and cooperation of people from all walks of life--parents, teachers, health and nutrition specialists, farmers and ranchers, state and federal officials are all crucial to making this happen and by doing so contribute to the larger goal of making Oklahoma's children healthier and Oklahoma's farms healthier too.

**Acknowledgements**

*Special thanks to:*

Kelli Sanger, Program Coordinator, Small Farm and Direct Marketing Program Washington State Dept. of Agriculture for her assistance in the development of the Oklahoma Institutional Food Survey

Thanks to members of the Community Food Security Coalition Internet list-serve for their advice and assistance.

Some of the information on selected Farm-to-School Programs around the country was taken from: *Healthy Farms, Healthy Kids Evaluating the Barriers and Opportunities for Farm to School Programs* by Andrea Misako Azuma and Andrew Fisher, January 2001, Community Food Security Coalition.

CFSC, PO Box 209, Venice, CA 90294 310-822-5410 [www.foodsecurity.org](http://www.foodsecurity.org)

*"Creative Ways to Sell and Distribute Locally Produced Foods to School and University Cafeterias: Examples of Selling and Distributing Food from Across the Nation,"* by Kelli Sanger, Washington State Dept. of Agriculture.  
KSanger@agr.wa.gov

# 2002 INSTITUTIONAL FOOD SERVICE SURVEY A Summary & Review

LARRY D. SANDERS & TIHOMIR ANCEV\*

## INTRODUCTION

During the Fall of 2002, the Oklahoma Food Policy Council conducted a survey of institutional food service providers throughout the state. The purpose of this paper is to provide an initial summary of the results and briefly discuss the findings. There will also be a brief discussion of additional statistical analysis options. While policy options are suggested by the results, no recommendations are made here.

Public school systems and public institutions such as colleges, prisons and resorts were surveyed about their practices and preferences related to purchases of locally- produced and processed foods. Based on the initial review of the results, it is apparent that there is a potential market for locally produced or processed foods among the institutional food services sector in Oklahoma. How aggressively this is to be pursued will be left to those private producers and processors (perhaps through cooperative efforts) and the Oklahoma Department of Agriculture.

Whether the benefits will outweigh the costs is not addressed in this study. The results may allow for more specific conclusions about the nature of the market, but this will likely require more analysis to assure statistical confidence. For example, local producers and processors may find some school systems and other public institutions more favorable than others, depending on size of the system or other factors.

However, responses to the categories of fresh and prepared produce may temper the optimism with the realistic conclusion that locally produced and processed foods may not match what is demanded by the local institutional food services. On the other hand, the top meat and dairy products demanded by institutional food services do match items that are or could be locally produced or processed.

## DISCUSSION OF RESULTS

Over 550,000 meals are served each day on Oklahoma public schools and other institutions. And, about 25% comes from Oklahoma agricultural producers and processors. However,

\*Authors are respectively Professor and Graduate Assistant of Agricultural Economics, Oklahoma State University, Stillwater, Oklahoma. Authors may be contacted at [lsander@okstate.edu](mailto:lsander@okstate.edu). The Oklahoma Food Policy Council developed the initial survey, with professional review by Dr. Kathleen Kelsey, Department of Agricultural Communications, Oklahoma State University, and Barry Bloyd, State Director, Oklahoma Office of the Agricultural Statistics Service, with coordination by Dr. James Horne, President & CEO of the Kerr Center and Kerr Center staff. Bloyd and his staff conducted the initial collation and tabular summary of data.

purchases of locally produced or processed food is not widely practiced among Oklahoma's public institutions.

The significant finding of the survey is that a majority of these institutions would be willing to make such purchases if institutional practices and policies supported such decisions.

Factors and concerns that affect these decisions include these:

- Oklahoma Office of Central Purchasing including local foods in contract services
- competitive prices
- availability of local sources consistent in timeliness and quality
- food safety
- order size
- processing and preparation
- payment arrangements
- awareness of Oklahoma food production and processing
- categories of desired food.

Public and private responses can be made to most of these barriers, improving the purchase and consumption of Oklahoma-produced food by Oklahoma public institutions. For example, private cooperatives can improve access, availability, consistency of timeliness and quality, accomodation of order size, payment arrangements, competitive prices and, to a lesser extent, categories of desired food. The state, through legislative actions and agency rules, can be supportive of local purchases, education on access, availability and safety. The target for education initially is the key person most systems have designated to make food purchase and preparation decisions. Since most institutions are willing to provide their names to area producers, state agencies could facilitate the process of linking buyers and sellers.

Seasonality and economic production of some desired foods may be problematic. Initial focus on foods for which Oklahoma has a competitive advantage, and public research on local production, processing and distribution are suggested strategies.

### **NEED FOR FURTHER SURVEY**

With the demand for organic and chemical-free produced and processed foods, the survey would have yielded additional interesting information if it had attempted to explore such institutional food service interests. There also remains an unanswered question about how receptive purchasing agents or managers of purchasing agents would be to awareness-building and education targeting such key personnel. For example, a subset of the survey sample could be provided information about the Made in Oklahoma program, or an inventory of local sources of fresh and processed food, then questioned to see if their willingness to make local purchases would be likely to change.

This survey evaluated the demand and potential demand for local food. The supply side has yet to be explored. Another survey instrument of current and potential local sources of food

production and processing could be at least as enlightening, and may be even more critical in the awareness-building for a potential market. Some inventories have been attempted by the Oklahoma Department of Agriculture, Oklahoma State University and state farm organizations. Coordination of these efforts could turn in to a mailing list for such a survey. It could also be important to survey producers and processors of "non-local" market food (food and feed grains, and livestock destined for bulk or mass markets).

Another survey instrument that could be considered would be to survey the broader market of all Oklahoma food consumers and the outlets those consumers use, such as grocery stores, convenience stores, farmers' markets and field (pick-your-own) markets.

**ATTACHMENTS**

- A. Table 1. Survey Sample and Response Rate
- B. Survey Description and Summary
- C. Summary of Responses by Question
- D. Additional Statistical Analysis Options
- E. Survey of Institutional Food Service Providers in Oklahoma

Appendix A

<b>TABLE 1. Oklahoma Food Policy Survey Sample and Response Rate</b>			
Category	Sample (Number)	Responses (Number)	Response Rate (%)
Large schools	65	53	81.5
Medium schools	242	166	68.6
Small schools	238	160	67.2
Other public institutions	93	47	50.5
<b>Total</b>	<b>638</b>	<b>426</b>	<b>66.8</b>

Note: Respondents were divided into 4 categories, with 3 of those of categories being public school districts varying by number of students in each district, herein after called "schools": (1) large schools with over 1500; (2) medium schools with 300 to 1500 ; (3) small schools with less than 300; (4) and other public institutions, which include colleges, prisons, state hospitals, career techs and state resorts.

## Appendix B

### SURVEY DESCRIPTION & SUMMARY

**Description.** The survey was developed by the Governor's Oklahoma Food Policy Council as an initial attempt to develop and improve markets for locally produced and processed food. A copy of the survey is attached. There were 27 substantive questions in the survey. Respondents were divided into 4 categories, with 3 of those of categories being public school districts varying by number of students in each district, herein after called "schools": (1) large schools with over 1500; (2) medium schools with 300 to 1500 ; (3) small schools with less than 300; (4) and other public institutions, which include colleges, prisons, state hospitals, career techs and state resorts.

**Summary of Sample Response.** The summary of the survey sample and response rate is shown in Table 1. There were 638 institutions in the survey sample. Of this sample set, 85% were public school systems. Five percent were colleges and universities, 6% were correctional centers and state hospitals, 2% were technology centers, and 1% were state resorts. Response rates for each category ranged from 42.9% of the technology centers to 84.8% of the public school systems with over 1000 students. The overall response rate for the survey was 66.8%.

An initial listing of key findings by Anita Poole, Kerr Center for Sustainable Agriculture, included these key points about responding institutions:

- three-fourths have not made local food purchases in the past year, with the most noted concerns relating to quality and cost
- of the one-fourth who did make local purchases, over four-fifths would be willing to make local purchases again
- two-thirds have salad bars
- three-fourths throw away excess food in the garbage or disposal
- nearly two-thirds are not aware of the Made in Oklahoma program
- over two-thirds would make local purchases, provided competitive price and quality and an available local source
- more than half would consider local purchases if they could purchase small quantities
- more than half want to at least make contact with local food sources.

## Appendix C

### SUMMARY OF RESPONSES BY QUESTION.

By order of the questions, these are summary results:

**1. Institutional consumers are divided over whether they prefer fruit canned (40.9%) or fresh (37.6%), while only a few prefer frozen fruit (3.3%).**

The market does appear to be segmented. Of the large public schools 46% prefer fresh fruits, and 32% prefer canned. For mid-size schools, 28% prefer fresh fruits, and 47% prefer canned. For small schools, 34% prefer fresh fruits, and 46% prefer canned. For other institutions, 74% prefer fresh fruit.

Thus, if statistical analysis supports these differences, a discerning local producer of fresh fruits, would want to target schools by size, or explore non-school institutional food services. Likewise, local processors that can fruit could optimize their marketing at mid to smaller size schools.

**2. The same consumers prefer their vegetables canned (42%), while some prefer fresh (24%), and less prefer frozen (16%).**

Large schools show 34% favor fresh vegetables, 19% frozen, and 28% canned. Mid-size schools show 22% favor fresh vegetables, 19% frozen, and 40% canned. Small schools prefer canned vegetables (53%) to fresh (19%). Other institutions prefer fresh vegetables (43%) to canned (30%).

Again, other institutions seem to be better markets for fresh vegetables, while smaller to mid-size schools seem to be better markets for canned vegetables.

**3. About two thirds (66.4%) of the institutions use salad bars.**

For large public schools, 64% have salad bars. Mid-sized schools show 77% use salad bars. Small schools show 58% use salad bars. Other institutions show 62% use salad bars.

Again, if statistical analysis validates the differences, local producers and processors of salad bar items find much opportunities among most institutional services (especially colleges and career techs), but there would be less opportunity among small schools.

**3a. Among the large school systems responding, 38 high schools, 46 middle schools and 84 elementary schools have salad bars. Among the mid-sized school systems, 123 high schools, 99 middle schools, and 167 elementary schools have salad bars. Among the small school systems, 58 high schools, 52 middle schools, and 73 elementary schools have salad bars. This suggests there is widespread use of salad bars for all grades of the public school systems in Oklahoma.**

**4. Food preparation location varies among off site, central processing and on site.**

- 5. Most institutions (75%) disposed of unneeded prepared food via the garbage or disposal. Only 3% donate it to food banks. Less than 1% make excess food available to agricultural producers.**

Most schools, colleges, prisons, state hospitals and resorts dispose of unneeded prepared food via the garbage or disposal. Most career techs use a variety of methods.

- 6. Most institutions (93%) are not members of any purchasing cooperatives.**

- 6a. However, of the 7% who are coop members, 93% say the cooperatives arrange for product delivery.**

- 7. Most institutions (75%) have a prime vendor from whom they purchase the majority of their food items.**

- 7a. Of these vendors, 45% are known to be Oklahoma owned.**

- 8. Most institutions (93%) do not have a contract with the vendor that prohibits them from making local purchases.**

- 9. Most institutions (92%) have suppliers that do not require exclusive agreements.**

- 10. Food orders in advance of preparation vary from an average 3.6 days for dairy, to 4.4 days for fresh produce, to 7.3 days for meats, to 9.8 days for canned food.**

Large schools differ from other schools and institutions: 18 days for canned foods, 5 days for fresh produce, 2.5 days for dairy, and 12.4 days for meat.

- 11. The top 5 fresh produce purchases for all responding institutions in 2000-2001 were, in order of most to least, apples, oranges, tomatoes, lettuce, potatoes.**

This may temper initial enthusiasm about the potential market because there are not likely to be locally produced apples and oranges. Locally produced tomatoes and lettuce may vary in quality and available for only a limited season. Of course, the potential for technology adoption to improve production in these areas are researchable topics.

- 12. The top 5 prepared produce purchases for all responding institutions in 2000-2001 were, in order of most to least, shredded lettuce, carrot sticks, baby carrots, celery sticks, broccoli florets.**

This may also temper some the enthusiasm for market potential because there are few processing enterprises for these preferred items in Oklahoma, and those that do exist are not dispersed in many local areas around the state.

13. The top 5 meat and dairy purchases for all responding institutions in 2000-2001 were, in order of most to least, milk, hamburger, cheese, eggs, chicken.
- The preferred meat and dairy products do lend themselves to possible locally produced and processed foods.
14. Most institutions (75%) have not purchased foods from a local producer in the last year. Large school systems were least likely to have made local purchases (83%), while mid-size systems (72%) and small school systems (74%) were only slightly more likely.
- 14a. Of the one-quarter of responding institutions that have made local purchases, they have varied from melons (21%), onions (19%), cheese (17%), pork and cucumbers (each 7%), ground beef (6%), dairy products (6%), and tomatoes (4%).
- 14b. About one-fifth of the institutions thought that such local purchases saw an increase in consumption. Most of these institutions who made such local purchases were either not sure (44%) that consumption was higher or were sure consumption did not increase (36%).
- 14c. Most of these institutions (82%) would make repeat local purchases. This is true for all categories of responding institutions. Only 4% said they would not make repeat purchases.
- 14d. Of the 4% who would not repeat local purchases reasons were mostly price, although quality, reliability and effort were noted as reasons by a few.
15. The types of information that institutions indicated would be helpful to make local food purchasing decisions included local food program information from other states (27%), local supplier lists (21%), health and safety information on local foods (19%), regulatory information (19%), assistance in developing multiple source buying systems (8%), and assistance/research on consumer preferences (7%).
- The desire for various types of information is generally consistent among different sizes of school systems.
16. If price and quality were competitive and local sources were available over two-thirds (68%) of the institutions either agreed or strongly agreed they would purchase food from local producers, while only 6% disagreed or strongly disagreed. About a quarter (26%) were uncertain.
17. Over half (55%) of the institutions responding indicated they would make local purchases if the Oklahoma Office of Central Purchasing offered local foods as part of their contract services, while only 6% did not agree, and 38% were uncertain.
18. About two-thirds (67%) of the institutions are not willing to pay a higher price to buy local foods, while only about (8%) would agree to higher prices, and 26% were uncertain.

19. Forty five percent of the sampled institutions said that tomatoes would be among the local foods they would be willing to purchase. Cucumbers and onions would be considered by 37%, along with other foods including lettuce (36%), eggs and potatoes (33%), melons and strawberries and ground beef (32%), cheese (26%), and dairy products (24%).
20. Motivations for institutions to serve locally grown or processed food range from support for the local economy and local community (42%) and access to fresher food (42%), to helping Oklahoma farms and businesses (41%), the ability to purchase small quantities (38%), higher quality food (34%), good public relations (26%), lower transportation costs (24%), less use of pesticides (23%), buyer knows product sources (18%), it would result in higher consumption of fruits and vegetables (16%), ability to purchase special varieties/types of produce (2%), while 5% indicated that nothing would motivate them to do so.
21. Concerns that institutions have about purchasing locally produced food include food safety (49%), cost (47%), supply reliability (46%), delivery considerations (42%), quality (37%), payment arrangements (36%), ordering method (31%), adequate volume (27%), package consistency (25%), and prime vendor considerations (14%).
22. Barriers that currently stop institutions from purchasing local foods include lack of local producers from whom to purchase (44%), lack of products available during certain times of the year (33%), safety (23%), lack of staffing to prep large amounts of fresh produce/uncooked bulk meat (23%), lack facilities to handle large amounts of fresh produce/uncooked bulk meat (23%), budget (21%), and convenience (20%). Other factors were identified by less than 15% of respondents (internal policies, state spending caps, other regulations).
23. About two-thirds (65%) of respondents are not aware of the Made in Oklahoma program. Public institutions other than the school systems are relatively more aware at 50%.
24. On average, about a quarter of the food served by respondents is Oklahoma grown or processed. This ranges from 21% in large schools to 25% in small schools and other public institutions.
25. The person who makes food purchasing decisions is likely the chef/food service director (77%), nutritionist/dietician (5.7%), administrator (5.2%), financial officer (2%), or other (10.2%).
26. Only about 19% of the institutions have a nutritionist prepare the menus. Public institutions other than school systems are more likely to do so (54%).
27. The total estimated number of daily breakfasts served by Oklahoma public school systems (excluding career tech, colleges and universities) is about 167,000, and daily lunches is about 386,000.

28. Over half (54.5%) would be interested in connecting with local food producers. More large school systems are interested (73%).
29. Of those who are willing, 77% were willing to share their names with area producers.

## Appendix D

### ADDITIONAL STATISTICAL ANALYSIS OPTIONS

The summary above is useful in making some obvious conclusions and drawing some inferences based on the general response. However, discussion about the differences among responses by category, or two-way profiles will need further scrutiny of the data and statistical analysis. For example, to state which category of respondents is most oriented toward buying local food and which types with confidence needs difference tests of statistical significance. There also needs to be some further analysis to evaluate the representativeness of respondents and their responses to the survey.

One likely technique of further analysis would be the development of a probability model (such as Logit ©) or Probit ©) where the answers to, for example, question 7a or 14c could be explained by some characteristics of the respondents, for example, having a salad bar, or who prepares the menu, whether they have a prime vendor, are part of a purchasing cooperative, or other two-way analysis. The results of such an estimation would provide much more meaningful conclusions with respect to any policy implications. This type of analysis would also be much more interesting from a research perspective and would potential for scientific peer review and publication. Additional resources would be required for such work.

## Appendix E

### Survey of Institutional Food Service Providers in Oklahoma

**1. My institution's consumers prefer most of their fruits:**

- Fresh
- Frozen
- Canned

**2. My institution's consumers prefer their vegetables:**

- Fresh
- Frozen
- Canned

**3. Does your institution utilize salad bars?**

- Yes    No

**3a. If yes and you represent a school district, how many schools in each category currently have salad bars?**

High Schools \_\_\_\_\_

Middle Schools \_\_\_\_\_

Elementary Schools \_\_\_\_\_

**4. Approximately what percent of menu items are: (a+b+c must total 100%)**

- a. Prepared at the service site \_\_\_\_\_%
- b. Prepared at a central district processing site \_\_\_\_\_%
- c. Prepared off site by a vender/caterer and delivered \_\_\_\_\_%

(Assume the site at which a food is "prepared" is where the most ingredients are brought together for a final dish. With the exception of fresh fruits and vegetables, heating a food is not considered "preparation".)

**5. Please check all methods used to dispose of unneeded prepared food:**

- We donate to food banks
- We donate to local charities
- We allow employees to take food home
- We sell excess foods
- We place excess foods in the garbage or down a disposal
- We make excess foods available to farmers or ranchers
- We add excess foods to our composting arrangements

6. Are you a member of any purchasing cooperatives?

Yes    No

a. If yes, does this cooperative arrange for product delivery?

Yes    No

b. Name of cooperative: \_\_\_\_\_

7. Do you have a prime vendor from whom you purchase the majority of your food items?

Yes    No

7a. If yes, is the company Oklahoma owned:

Yes    No

8. Do you have a contract with a food vendor that prohibits your from making local purchases?

Yes    No

9. Does your supplier require an exclusive agreement?

Yes    No

10. How many days in advance of actual food preparation do you order food supplies?

Canned Food   \_\_\_ days

Produce (fresh) \_\_\_ days

Dairy   \_\_\_ days

Meats   \_\_\_ days

**Instructions: Please complete the following based on food used during your fast fiscal year (If your institution is a school and participates in summer food services, please include that data as well).**

11. What were the top 5 FRESH PRODUCE purchases you made in 2000-2001?

(I.e. whole potatoes, whole apples, fresh strawberries, etc.)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

**12. What were the top 5 PREPARED PRODUCE purchases you made in 2000-2001?**  
 (i.e. shredded lettuce, peeled carrots, etc)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**Instructions:** Please complete the following based on food used during your last fiscal year  
 (If you institution is a school and participates in summer food services, please include that data as well).

**13. What were the top 5 MEAT & DAIRY purchases you made in 2000-2001?**  
 (i.e. hamburger, cold cuts, pork chops, cheeses, milk, eggs,)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**14. Have you purchased foods from a local food producer in the last year?**  
 (If no, skip to question #15)

- Yes     No

**14a. If yes, what products have your purchased?**

- |   |   |                                      |
|---|---|--------------------------------------|
| <input type="checkbox"/> Pumpkins                       | <input type="checkbox"/> Lettuce        | <input type="checkbox"/> Ground Beef |
| <input type="checkbox"/> Peas                           | <input type="checkbox"/> Dairy Products | <input type="checkbox"/> Cheese      |
| <input type="checkbox"/> Spinach                        | <input type="checkbox"/> Tomatoes       | <input type="checkbox"/> Melons      |
| <input type="checkbox"/> Sweet Corn                     | <input type="checkbox"/> Beans          | <input type="checkbox"/> Squash      |
| <input type="checkbox"/> Strawberries                   | <input type="checkbox"/> Cabbage        | <input type="checkbox"/> Eggs        |
| <input type="checkbox"/> Mushrooms                      | <input type="checkbox"/> Cucumbers      | <input type="checkbox"/> Pork        |
| <input type="checkbox"/> Blackberries                   | <input type="checkbox"/> Potatoes       | <input type="checkbox"/> Pecans      |
| <input type="checkbox"/> Chicken                        | <input type="checkbox"/> Grains         | <input type="checkbox"/> Lamb        |
| <input type="checkbox"/> Okra                           | <input type="checkbox"/> Onions         |                                      |
| <input type="checkbox"/> Other (please describe): _____ |   |                                      |

14b. Did you see an increase in fruit and vegetable consumption by consumers when serving locally produces foods?

- Yes  No

14c. Would you buy products from local producers again?

- Yes  No  Not Sure

14d. If no, please describe why (check all that apply):

- Inconsistent quality  
 Not reliable  
 Too much effort  
 Price  
 Other: please describe why \_\_\_\_\_

15. Please check information that would be helpful for you in making local food purchasing decisions. Check all that apply.

- Information on local food programs from around the country  
 Lists of suppliers and products for local sources  
 Health and Safety information of local foods  
 Regulatory information:  
(What are the rules about buying foods direct from farmers? Is it legal?)  
 Assistance in developing a system for buying from multiple sources  
 Assistance/research on consumers' vegetable & fruit serving preferences in your institution

16. I would purchase food directly from a local producer (grower/farmer) if price and quality were competitive and a source was available.

- Strongly Agree  
 Agree  
 Disagree  
 Strongly Disagree  
 Uncertain

17. I would purchase locally produced foods if the Oklahoma Office of Central Purchasing offered local foods as a part of their contract services.

- Strongly Agree  
 Agree  
 Disagree  
 Strongly Disagree  
 Uncertain

**18. My institute would be willing to pay a higher price to buy locally produced foods to serve in cafeterias.**

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree
- Uncertain

**19. My institution would be interested in buying these foods from local producers.  
(Check all that apply)**

- |                                       |   |  |
|---------------------------------------|---|--|
| <input type="checkbox"/> Pumpkins     | <input type="checkbox"/> Lettuce        | <input type="checkbox"/> Ground Beef                       |
| <input type="checkbox"/> Peas         | <input type="checkbox"/> Dairy Products | <input type="checkbox"/> Cheese                            |
| <input type="checkbox"/> Spinach      | <input type="checkbox"/> Tomatoes       | <input type="checkbox"/> Melons                            |
| <input type="checkbox"/> Sweet Corn   | <input type="checkbox"/> Beans          | <input type="checkbox"/> Squash                            |
| <input type="checkbox"/> Strawberries | <input type="checkbox"/> Cabbage        | <input type="checkbox"/> Eggs                              |
| <input type="checkbox"/> Mushrooms    | <input type="checkbox"/> Cucumbers      | <input type="checkbox"/> Pork                              |
| <input type="checkbox"/> Blackberries | <input type="checkbox"/> Potatoes       | <input type="checkbox"/> Pecans                            |
| <input type="checkbox"/> Chicken      | <input type="checkbox"/> Grains         | <input type="checkbox"/> Lamb                              |
| <input type="checkbox"/> Okra         | <input type="checkbox"/> Onions         | <input type="checkbox"/> Other (please describe):<br>_____ |

**20. What would motivate you to serve locally grown or processed food in your institution?  
(Check all that apply)**

- Access to fresher food
- Support local economy and local community
- Higher consumption of fruits and vegetables
- Buyer knows product sources
- Lower transportation costs
- Less use of pesticides
- Higher quality food
- Good public relations
- Would help Oklahoma farms and/or Oklahoma businesses
- Ability to purchase small quantities
- Ability to purchase special varieties, types of produce
- Other \_\_\_\_\_
- None

**21. What concerns do you have with regard to purchasing locally produced foods?***(Check all that apply)*

- Food safety
- Adequate volume
- Reliable supply
- Ordering method
- Payment arrangement
- Delivery consideration
- Prime vendor considerations
- Cost
- Package consistency
- Quality
- Other \_\_\_\_\_

**22. What barriers currently stop you from purchasing foods directly from local producers?***(Check all that apply)*

- State spending cap on discretionary purchases (Institutional food service must enter into formal contract for any purchases over a certain amount)
- Institutional (internal) purchasing policies
- Lack of local producers in area from whom purchase
- Other Regulations
- Lack of products available during certain time of the year
- Safety
- Budget
- Convenience (one-stop shopping)
- Lack facilities to handle large amounts of fresh produce/uncooked bulk meat, etc
- Lack staffing to prep large amounts of fresh produce/uncooked bulk meat, etc
- Other:

The Oklahoma Food Policy Council is interested in knowing what would encourage you to change your purchasing behavior to include more state produced and processed food. There are over one-hundred and thirty different types of food products made in Oklahoma.

**23. Are you aware of the Made in Oklahoma program of Oklahoma Department of Agriculture ([www.madeinoklahoma.net](http://www.madeinoklahoma.net))?**

- Yes    No

**24. What percentage of the food you serve is Oklahoma grown or processed?**

(Please estimate if not know)

\_\_\_\_\_ %

**25. Please identify the title of the person who makes your food purchasing decisions?**

- Nutritionist/dietician
- Chef/food service director
- Administrator
- Financial officer
- Other: \_\_\_\_\_

**26. Does a nutritionist prepare your menu?**

- Yes    No

**27. If you represent a school, how many students do you serve daily on average?**

- Breakfast    Lunch

The Oklahoma State Department of Agriculture and the Oklahoma Food Policy Council are working to link local food growers and school food service operations in Oklahoma. If you are interested in linking your institution's food service with local producers, and/or would like to know more about these connections, please provide your name and contact information below. This information will only be used to link you with local producers, as a way to contact you and/or to send more information about local food connections in your area, and will be kept separate from your survey information.

**28. Are you interested in connecting your institution with local food producers?**

- Yes    No

**29. If yes, may we share your name with producers in your area?**

- Yes    No

**30. Contact information (optional):**

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Title: \_\_\_\_\_

Institution Name: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Thank you for taking time to fill out this survey. Your participation is very important to us. If you have any additional comments regarding this survey or purchasing locally produced foods, feel free to write them here.

Please complete this questionnaire and return it in the enclosed postage-paid envelope to:

Oklahoma Food Policy Council  
c/o Okla. Department of Agriculture, Food, and Forestry  
P.O. Box 528804  
Oklahoma City, OK 73152-9964  
You may fax completed survey to (918) 647-8712  
Questions? Call (918) 647-9123

# Nutrient Intakes

CNMap is a collection of food and nutrition indicators obtained from a variety of sources. Information on nutrient intakes, healthy eating patterns, physical activity and body weight come from the United States Department of Agriculture (USDA) Continuing Survey of Food Intakes by Individuals (CSFII) 1994-96, 1998. Pyramid Servings groups (fruit, grain, vegetable, dairy, and meat) estimates are for individuals 2 years old and over who meet the minimum daily servings recommendations.

All weight estimates are based on body mass index values computed from self-reported height and weight obtained from CSFII participants. Individuals over 20 years old with index values of 25 and over are in the overweight and unhealthy weight categories; those with index values of less than 19 are in the unhealthy weight class. Individuals 0 to 20 years old with index values of 24.5 and over are in the overweight and unhealthy weight categories; those with index values of less than 13.5 are in the unhealthy weight class.

Not all states were covered in the CSFII. The Community Nutrition Research Group has assigned these states the values of the estimates for the region (Northeast, South, Midwest, and West) in which they reside.

Information on Farmer's Markets was obtained from the Agricultural Marketing Service web site. Food Stamp participation rate is a combination of information from the USDA Food and Nutrition Service food stamp participation totals and the Bureau of the Census household totals.

Hunger information comes from the Food Security Supplement of the Current Population Survey conducted by the Bureau of the Census for the USDA Economic Research Service.

<b>Nutrient Intakes</b>	<b>Oklahoma</b>	<b>All U.S.</b>
Percentage of individuals meeting REI - Energy	28.0	30.8
Percentage of individuals meeting RDA - Calcium	30.9	36.0
Percentage of individuals meeting RDA - Folate	59.8	63.6
Percentage of individuals meeting RDA - Iron	55.6	59.2
Percentage of individuals meeting RDA - Magnesium	35.1	40.2
Percentage of individuals meeting RDA - Niacin	66.4	69.8
Percentage of individuals meeting RDA - Phosphorus	65.5	69.6
Percentage of individuals meeting RDA - Protein	72.5	75.4
Percentage of individuals meeting RDA - Riboflavin	62.6	67.4

Percentage of individuals meeting RDA - Selenium	80.4	83.3
Percentage of individuals meeting RDA - Thiamin	62.4	66.0
Percentage of individuals meeting RDA - Vitamin A IU	39.2	44.5
Percentage of individuals meeting RDA - Vitamin A RE	36.1	41.3
Percentage of individuals meeting RDA - Vitamin B6	41.8	46.2
Percentage of individuals meeting RDA - Vitamin B12	73.5	75.7
Percentage of individuals meeting RDA - Vitamin C	53.2	57.8
Percentage of individuals meeting RDA - Vitamin E	30.9	32.6
Percentage of individuals meeting RDA - Zinc	25.5	28.8
Percentage of individuals using supplements	41.9	45.7
<b>Healthy Eating Patterns</b>	<b>Oklahoma</b>	<b>All U.S.</b>
Percentage of individuals meeting vegetable recommendation	46.0	49.7
Percentage of individuals meeting grain recommendation	44.6	43.7
Percentage of individuals meeting fruit recommendation	23.3	29.1
Percentage of individuals meeting meat recommendation	18.3	22.4
Percentage of individuals meeting dairy recommendation	36.0	36.6
Percentage of individuals with energy from total fat <= 30%	33.7	37.0
Percentage of individuals with energy from saturated fat < 10%	37.9	39.5
Percentage of individuals with cholesterol intake <= 300mg	71.6	71.2
Percentage of individuals with sodium intake <= 2,400mg	37.3	36.2
<b>Physical Activity and Body Weight Indicators</b>	<b>Oklahoma</b>	<b>All U.S.</b>
Percentage of individuals who exercise at least once monthly	53.3	53.9
Percentage of individuals with healthy weight	52.3	53.5
Percentage of children overweight	19.3	16.1
Percentage of individuals overweight	43.9	42.6

<b>Food Secure Indicators</b>	<b>Oklahoma</b>	<b>All U.S.</b>
Farmer's Markets listed in National Directory	26.0	2,862.0
Percentage of households receiving food stamps 1996	11.6	10.7
Percentage of households receiving food stamps 1997	10.3	9.5
Percentage of households receiving food stamps 1998	9.2	8.2
Percentage food secure households, 1995	83.0	88.3
Percentage food secure households, 1996	87.1	88.7
Percentage food secure households, 1997	90.6	90.4
Percentage food secure households, 1998	84.4	88.2
Percentage food secure households, 1999	88.4	89.9

# Some of the Food Crops Produced in Oklahoma

- apples
- apricots
- asparagus
- green lima beans
- snap beans
- beef
- beets
- blackberries
- blueberries
- broccoli
- head cabbage
- cantaloupes
- cheese
- cherries
- chicken
- collards
- corn
- green cowpeas and green southern peas
- cucumbers and pickles
- eggs
- eggplant
- goat
- grapes
- herbs, fresh cut
- lamb
- lettuce
- milk
- mustard greens
- nectarines
- dry onions
- green onions
- okra
- peaches
- pears
- green peas, excluding green cowpeas
- pecans
- hot peppers
- sweet peppers
- plums
- pork
- pumpkins
- raspberries
- soybeans
- spinach
- squash
- sweet corn
- strawberries
- tomatoes
- turnips
- turnip greens
- watermelon
- wheat

# Oklahoma Food Policy Council 2002-2003

Terry Peach, Oklahoma Secretary/Commissioner of Agriculture

## MEMBERS

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Kerr Center for Sustainable Agriculture

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Kim Barker, rancher, Oklahoma Land  
Stewardship Alliance

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