TIPS & TOOLS
The decision to become a Farm-to-School supplier is not one to be made lightly. As previously eluded to in the Food Safety section, there are many aspects of Good Agricultural Practices (GAP), quality assurance and even Hazard Analysis Critical Control Points (HACCP) that need to be considered. However, to help in making that decision, a combination of advice/tips, document examples, suggested publications and descriptions of helpful programs has been provided.

Tips for Farmers Delivering to a Distributor

The following tips and suggestions were provided by producers who have made the decision to deliver their produce to a food service distributor. These tips are not all-encompassing and may vary by distributor (usually depending on the size of the distributor), but they do serve as good advice for a range of requirements and expectations.

• **Contact information:** Distributors will want to know as much information as possible, but will definitely require farm name, address and Employment Identification Number (EIN).

• **IRS form number:** This form will need to be completed and signed.

• **Product liability insurance:** Although there may be a few distributors who will not require product liability insurance (however doubtful), most will ask for coverage in the range of $1 million - $3 million per incident per product. If the insurance requirement is cost prohibitive, ask the distributor to discuss the potential for a lower insurance exception with their risk management. Some companies will make a lower exception because the farmer is not delivering on a 12-month basis.

• **Memorandum of Understanding (MOU):** Prior to delivering anything, a MOU needs to be in place. An example has been provided on the following page.

• **Food safety documentation:** Make sure the farm has a food safety plan in place with standard operating procedures for produce production, harvesting and post-harvest handling. Your state fruit and vegetable extension specialist, State Department of Agriculture or State Department of Health can be an excellent resource when developing a food safety protocol. Resources will vary from state to state. This can be used as a marketing tool as well.

• **Third-party certification:** Third-party certification requires that an outside company audits the farm and packing shed and certifies that a food safety plan and documentation system is in place. Certification can be quite costly, but will satisfy most grocery store chain and food distributor requirements. With the increased emphasis on food safety, more distributors are requiring third-party certification.

• **Delivery vehicle:** Delivery may mean using a refrigerated truck. See the Food Safety section for proper storage temperatures for various fruits and vegetables.

• **Produce packaging:** All products should be packed in sturdy, heavy boxes either on a pallet or ready to be be stacked on a pallet at a distribution center. Use heavy plastic straps to hold boxes in place on pallet, do not shrink wrap fruits or vegetables (this limits airflow to products), and date every box to guarantee the level of freshness. Note using a distinct box with farms name is recommended; however a 5”x7” label applied to the box can help preserve product integrity.

• **Cross-docking:** Many smaller produce companies in outlying areas will purchase their produce from larger produce companies in metropolitan areas. For efficient use of farmer and distributor time, cross-docking arrangements can be made for a small fee. In such a case, produce is delivered to a large produce company, where it will be used by that company for
their school customers but also picked up by smaller produce companies to deliver to schools in their area. Cross-docking arrangements need to be made prior to delivery and are usually charged a per-case or per-pallet fee.

**Produce quality:** Quality is extremely important to the distributors and the schools. Quality means size of the fruit or vegetable, freshness, storage temperature, and ripeness. A farmer should already know how many days it will take to get the produce from the farm and to the schools, including the time the produce is held by the distributor. For example, produce companies may deliver orders Monday mornings, so a producers will have to deliver their produce on Friday so it is ready to be loaded on the delivery truck Sunday or early Monday morning. Most distributors do not receive produce on Saturday or Sunday.

**Pricing:** Pricing can vary tremendously. Some companies will take mark-up on the produce and charge a delivery fee. Some statewide programs, such as the one in Oklahoma, have negotiated a set price that is paid to the farmer and then a distributor agrees not to charge a mark-up on the produce, instead delivering for a (currently) set $1.70 per case fee. It is important for the farmer to be within 10% of the prevalent wholesale price for the schools to be able to afford the produce.

**Bill of lading:** A bill of lading is similar to an invoice but is used more for tracking delivery times and drivers, documenting receipt and delivery of products. A producer needs to provide a bill of lading with every delivery.

**Delivery appointment:** Farmers need to set appointments with distributors for delivery of produce. Larger distributors in particular have to orchestrate delivery of many products at one time, and a scheduled delivery may keep a farmer from having to wait in a line to drop off products.

**Purchase orders:** Some distributors will require a purchase order to be in place before delivery. Farmers need to be able to provide this document and all other documents in a uniform and timely manner.

**Unloading:** When delivering produce to different distributors, some docks may be unionized for unloading and extra fees may apply. A farmer must be prepared to pay these fees or personally unload the produce. It has even been suggested that a farmer carry his or her own pallet jack. It also has been suggested that a big smile – and possibly even a tasty treat – can go a long way in establishing a good relationship with dock crews.

**Tips for FTS Program Administrators and Volunteers**

For those helping to establish or expand a FTS program, whether farmers or volunteers, additional tips and lessons learned include:

- Change doesn’t happen overnight. Patience, communication and willingness are vital. Keep a log of the program’s results on a monthly basis to track growth and spot potential problems.
- Say thank you to all the farmers, school representatives and distributors participating in the effort.
- Meet with distributors every year.
- Go with farmers for their first FTS delivery if possible, especially if they are inexperienced with delivering to a distributor.
- Don’t add more than one or two crops per year on a statewide program.
- Don’t incorporate more produce items than can be controlled. The inability to guarantee quantities and/or quality of produce due to crop failure causes problems for larger schools to make adjustments on orders and menus, resulting in a loss of momentum for the program.
- Make sure when notifying schools of crop problems the distributor is notified as well. Ask schools if they want their distributor to fill the order with non-FTS produce to maintain their scheduled menu.

**Tips for Schools Wanting to Receive FTS Produce through their Distributor**

For schools considering FTS program participation, steps must be taken to ensure their distributor(s) can and will also become active participants in the program. Tips include:

- Ask the distributor if they are purchasing from any local growers.
- If they are not currently purchasing produce from local growers, ask them if they would do so.
- When developing bid specifications for distributors, make one of the requirements be sourcing local produce when available.
- Bid specifications also can include requirements on the number of days from harvest to delivery to school for locally grown produce.
Overview of agreement with (name of distributor), the Oklahoma Farm-to-School Program & (name of farm).

1) Farm to School Coordinator will notify (name of contact person at distributor), three days prior to delivery into the (name of Distributor’s) warehouse, which in most cases will be the Tuesday before the produce is delivered to its warehouse on Friday morning, the following information:

   a) What produce will be coming in and who the product will be coming from. Prior approval of the produce, the company and the paperwork will already need to have taken place with (contact name at distributor).
   b) What school districts will be receiving the farm to school produce.
   c) Any instructions of individual school deliveries within the school district.
   d) Will notify (contact person’s name) if there are any shipping challenges that will affect their weekly order or the school’s weekly order.

2) (Name of Farm) will:

   a) Will contact (name of contact person who makes delivery appointments at the distributor – may be the same person listed above and may be a different person depending on the size of the company) by Tuesday of each week to schedule an appointment for delivery for each Friday morning.
   b) Will place a packed by date on each case of produce delivered.
   c) Will deliver order on a pallet and either not charge for the pallet or do a pallet exchange.
   d) Will ship in a refrigerated truck, if required.
   e) has provided a copy of their insurance for (amount of insurance required by the distributor) in liability.
   f) Will practice Good Agricultural Practices in all stages of growing, harvesting and shipping the (type of produce).
   g) Will give credit for any quality problems with the produce.
   h) Will provide the distributor with a Bill of Lading for the order that is delivered.
   i) Will bill the distributor for the shipment in a timely manner.

3) (Name of distributor) will:

   a) Issue a purchase order in their system after being contacted by the Farm-to-School Coordinator with the information outlined above (If the distributor requires a purchase order to be in place for delivery. That will be required more so for the larger companies but should be discussed and agreed as needed).
   b) Will let the school sales representatives know what farm-to-school produce will be delivered to the schools.
   c) Will pay (name of the farm) for the product and then add (amount of agreed on delivery fee or markup) delivery fee to each case, deliver to the schools and bill the schools for the entire amount of the school's order. To be able to get such a low delivery fee, the delivery needs to be in the warehouse prior to the distributor loading the truck, and they will “drop it off” so it becomes a part of the load that they are already delivering to.
   d) Will notify the Farm-to-School Coordinator immediately of any problems encountered.
   e) Will notify the Farm-to-School Coordinator of any procedural problems or changes.
   f) Will deliver farm-to-school produce to the assigned schools within 1 week of receipt in distributor’s warehouse.

Signature of Distributor ___________________________ Date ____________

Signature of Farmers ___________________________ Date ____________

Signature of Farm-to-School official ___________________________ Date ____________
**Tips for Distributors Working with Local Growers and Schools for FTS Programs**

In many cases, distributors actively support and pursue the expansion of local produce programs such as FTS. As the link between the farmers and the schools, they have the responsibility of developing sound business relationships with both. Tips for distributors include:

- Be upfront with growers and/or the FTS coordinator in what your requirements will be for the farmer – packaging, quality, insurance requirements, food safety documentation, etc.
- Consider reasonable exceptions when asked to do so.
- Linking with local growers can provide a new source for produce and an additional marketing benefit for your company.
- If your company is interested in doing business with local farmers, be flexible when possible and consistently communicate your needs.
- Take advantage of backhauling opportunities.

**Tips for Farmers or Groups of Farmers Delivering Directly to Schools**

Individual farmers, collective participants at farmers markets and farmer cooperatives may all form ideal partnerships with schools. Topics such as food safety, purchasing methods, pricing, supply reliability, quality, etc. have already been discussed in this publication, but listed below are additional tips for developing a direct delivery partnership with schools.

- **Develop a relationship with local schools:** Individuals or representatives for farmer groups should contact and meet with food service directors to determine their willingness to purchase locally grown produce. State FTS program coordinators may be helpful in this area. If the schools are interested in purchasing locally grown produce, determine their demands for various commodities and assess your individual or collective ability to meet some of those demands (see the Produce Calculator also discussed in this section of the publication). Consider providing typed lists of the commodities (and varieties) that will be produced, the expected harvest season for each commodity and plans to ensure food safety and quality (e.g., GAP and HACCP plans). If possible, bring samples of the produce, information on crop production plans and/or pictures of the farm(s).

- **Learn how schools obtain and serve food items, especially fresh produce:** Food service directors and administrators are paying closer attention to the overall nutritional role served by school meal programs. In general, much of the fresh produce served in schools is not necessarily aligned with the local seasonal availability. Some school food service managers create menus several months in advance. Others have more flexibility, especially with secondary schools and when offering fruit, vegetable and salad bars. Schools participating in the Federal School Lunch and Breakfast program only can use foods produced in the U.S. with the exception of a couple of items and are required to meet minimum USDA dietary requirements for their meals.

- **Develop a clear understanding of ordering methods and delivery needs:** School food service managers must follow state and federal procurement guidelines. Small purchase thresholds will vary from state to state. Identify the number of drop sites per school district (e.g. central warehouse or drops for each school in the district). Ask about the preferred time of day and day(s) of the week for delivery. Ask about packaging needs for specific crops. If using stackable, recycled plastic containers, discuss arrangements for recovering and “trading out” containers. Discuss desired product quality guarantees by the farmer and the protocol for handling any complaints upon delivery. Schools should verify product condition upon delivery and ensure the produce is stored and handled accordingly.

- **Determine the economic potential for “whole-sale” pricing/marketing:** Education programs encourage food service managers to purchase the highest quality food items they can afford, advising that “cheapest is not always best.” Farmers selling produce to schools can expect to receive prices very comparable, if not higher, than those at the wholesale terminal market prices. Daily prices are posted at www.ams.usda.gov/fv/mncs/TERMVEG.htm. Farmers selling through “wholesale” channels should carefully evaluate their production costs relative to prices received. One pricing strategy is to offer products at current wholesale value plus an agreed upon percentage above the market price.

- **Discuss payment arrangements:** Food manager concerns regarding this topic may stem from their knowledge that payments to distributors/vendors are often made within 30 days, sometimes longer for new vendors. Farmers should be aware payment upon delivery is highly unlikely. However, once an account is established with the school district and deliveries with proper invoices begin, payments will follow. To avoid payment delays, sales invoices should in-
clude the following: all provider contact information, date, invoice number, purchase order number (if the schools assign one), specific items sold, weight and/or units sold, unit cost, total cost, and signed and dated documentation by food service staff indicating products were received and approved.

- **Weigh the possibilities of participating in both farmers markets and FTS:** Farmers/farming groups selling their produce for direct retail price through farmers’ markets may be reluctant to sell their commodities at a wholesale price to schools. However, a FTS program may provide additional benefits to farmers’ market participants. For example, the school year begins when most farmers’ markets are slowing down or closing, and FTS programs provide excellent markets for cool season crops. Additionally, the time commitment for marketing to a school district will be considerably less than selling in a farmers’ market, and bulk packaging to meet school needs is less expensive than individual packaging for farmers market customers.

**For the School Food Service**

When developing a Farm-to-School program, there are many resources that can assist you in building your program. Partnerships are very important and helpful. Work with school principals and PTA. Ask for parent volunteers to assist with the kitchen prep of fresh produce, pick up produce at the farm or in planning and coordinating hands-on nutrition education activities, such as food tastings, cooking activities, farm visits and school gardens. Members of your school’s Health Advisory Committee may be able to help. Farm-to-School is a wonderful opportunity to work together toward the common goals of improving school meals. A good strategy is to have an organizing meeting to present your ideas and to allow others to express theirs.

For a school that wants to approach their local farmer/farming group, the process is the same as listed above. Look for those growers who show a real willingness to work with you — and be willing to work with them. The school food procurement system does not naturally lend itself to buying direct from farmers. In developing a procurement system that works for farmers and schools, both sides will have issues and concerns that deserve consideration and discussion.

Ask the farmer about crops they grow and tell what you are looking for: supply reliability, quality (ask for samples and if interested, ask if you could visit their farm). Another item to discuss is price, delivery, packaging and payment. Most farmers will prefer payment within 15 – 30 days, but some will accept payment up to 45 days after the sale.

During the main produce growing season, farmers will work from sun up to sun down. Ask them when the best time to call them would be. Once the relationship begins, the farmer can e-mail a weekly availability sheet with prices to the school food service and have them return the orders a day or two later for the upcoming weeks harvest and delivery.

**Tips for Working with An Exclusive Local Distributor**

While the “typical” wholesale food service distributors control a vast majority of the school food deliveries, recent years have shown an increase in the development of small distributors catering specifically to food service demands for locally grown items. These specialty distributors market both the locally grown commodities and the sustainable agriculture characteristics of the supplying farms/farmers. These distributors usually work with small- and medium-sized growers who are too small for more conventional distributors, but pooling the output from these growers allows the exclusive distributors to meet demands for both quantity and quality of product. As a result, the farmers represented by these specialty distributors often avoid some middleman costs and, therefore, receive a higher percent of the consumer dollar. The following are tips for farmers considering the use of exclusive local distributors:

- Ask about year-round marketing potential. Some of these distributors will change their marketing practices and channels to match the seasonal availability of produce.
- For some producers, these distributors may charge either a flat rate or a percentage fee to deliver products to restaurants, hospitals, schools/universities and even farmers’ markets.
- Some exclusive local distributors also provide facilities where crops can be washed, graded and packed.
- These distributors may use backhauls to keep down the distribution costs for the farmers they represent, so it may be in the farmers’ best interests to help them identify backhaul opportunities.
- Pick-ups at the farm may be possible, or a convenient point of exchange may be negotiated.
- Produce turn-around is often faster with these specialized distributors, which should mean a faster payback for the farmer.
- Some of these distributors are brokers for the farmers, but others may simply purchase produce from farmers at the prevailing wholesale price.
The national FTS Web site (www.farmtoschool.org) provides links to a number of useful organizations, publications and online materials. Some examples of beneficial organizations, publications and online references (in no particular order) include:

USDA-Food & Nutrition Service
3101 Park Center Drive
Alexandria, VA 22302
(703) 305-2062
Fruits and Vegetables Galore – Quality Food for Quality Meals – Buying Fruits & Vegetables

Applying Geographic Preferences in Procurements for the Child Nutrition Programs

Eat Smart—Farm Fresh! A Guide to Buying and Serving Locally-Grown Produce in School Meals (Note: This publication has an extensive list of information providers, research reports and planning guides.)

Healthy School Meals Resource System
USDA’s Team Nutrition
3101 Park Center Drive, Room 632
Alexandria, VA 22302
(703) 305-1624
http://healthymeals.nal.usda.gov

Community Food Security Coalition
Distribution Models for Farm-to-School
http://www.foodsecurity.org/f2s_distribution_method.pdf

DoD Farm-to-School Program – Frequently Asked Questions
http://www.foodsecurity.org/dod_f2s.pdf

USDA-Agricultural Marketing Service
1400 Independence Ave., SW
Room 2646 - S, Stop 0269
Washington, DC 20250-0269
(202) 720-8317
How Local Farmers and School Food Service Buyers Are Building Alliances

Quality Standards by Commodity
http://www.ams.usda.gov/AMSV1.0/standards

Useful Sources of Information and Assistance

The following are examples of exclusive local distributors:
- Appalachian Harvest – http://www.asdevelop.org
- Urban Agrarian – http://www.uaoklahoma.com
In addition to these tips and resources, two new software programs have become available to assist producers in the planning and financial analysis of FTS program participation: the Produce Calculator and the Farm-to-School Distribution Cost Template.

The Produce Calculator helps farmers determine the amount of produce to be delivered to meet the demands of a school nutrition program. The Produce Calculator allows its users to define the type of produce and, with input from the school regarding the number of meals to be prepared, determine the amount of raw produce needed to meet that demand and cost per serving size to the school.

The Farm-to-School Distribution Cost Template helps producers understand the true costs of produce delivery and assists in the determination of “farm gate” values for their crops. This template allows users to consider and compare different delivery methods for their crops, helping them to make determinations regarding the optimal delivery method(s) for their FTS produce.

The following sections provide a detailed description of these software programs and their applications.

**Farm-to-School Distribution Cost Template**

The costs of getting food products from the point of production to the point of consumption are often poorly understood. The many options involved in distributing food products are one factor leading to this lack of transparency – both in the understanding of distribution logistics and the assessment of cost efficiencies.

Distribution of produce can occur in many forms or even combinations of forms. Some of the most common distribution methods are:

- **Direct delivery by the producer.** In this form of distribution, the producer maintains direct and complete control over the produce from the farm to the user, which may be the final consumer (e.g. buyers at a farmer’s market) or a food service provider (e.g. a school, a restaurant, etc.).

- **Farm-to-warehouse delivery.** For this distribution system, a producer sells and delivers (directly or by contracted shipment) bulk product to a warehouse, which in turn distributes the produce to customers across a larger geographic region. The warehouse, typically operated by a broker or a food distributor firm, may or may not perform some minor value-added activities (e.g., sorting, cutting, packaging) prior to distribution.

- **Farmer contracted use of an intermediary.** In this case, a producer will directly deliver his or her produce to an intermediary that does not take ownership of the produce but does perform certain marketing/distribution services for a fee. An intermediary may be another producer, a group of producers acting as a cooperative entity or a broker. The intermediary serves as an agent for the producer and charges a fee for services rendered. These services may also include activities such as washing, sorting/grading and packaging.
The Farm-to-School Distribution Cost Template is available in an interactive Microsoft Excel Worksheet. With three distribution options: direct delivery, deliver to warehouse or using an intermediary source, this template is compatible with your specific distribution needs. To download the template visit www.okfarmtoschool.com/resources/fts-distrosafetymanual

It is certainly possible and quite probable for more than one of these distribution methods to be utilized by a producer. For example, a producer participating in a FTS program might make direct deliveries to local schools in his or her farm truck, participate in a cooperative effort to deliver large quantities to larger schools with one or more neighbors (e.g., paying a weight-rated share of trucking fees), and deliver produce to a warehouse that will in turn deliver to foodservice providers statewide. The mix of options can be further complicated if the use of refrigeration or activities such as sorting, cutting and packing are involved.

Each method of distribution has its pros and cons. For a small producer with limited output, one method may be vastly superior to all others. For producers with large quantities of perishable commodities, all options may be necessary to market the produce in a timely manner and avoid losses due to spoilage. Each distribution channel represents a certain set of costs, thus a different set of returns to the producer. The challenge is to maximize profit potential across the available options.

To help producers recognize the costs associated with different distribution channels and the farm-gate margins resulting from their choices, agricultural economists with the OSU Food & Agricultural Products Center (FAPC) developed a publicly-available, spreadsheet-based template that makes cost calculations much easier to determine and compare. With user-provided information on produce, delivery vehicles, travel distance, number of delivery points, labor costs and fee-based distribution services, the template calculates a producer’s operating cost per mile for deliveries (to a school, a warehouse or an intermediary), the total distribution costs per unit of produce, and the farm-level returns for each unit of produce.

One valuable attribute of the template is the ease with which producers can examine the sensitivity of their returns to changes in one or more cost factors and/or a change in the market price for their produce. A person with even a little spreadsheet experience can easily create sensitivity tables by making incremental changes in one cost factor (e.g., fuel price) or the distance traveled and recording the impacts on farm-level returns.

Even seemingly small changes in one cost factor may have great impacts on total distribution costs. For example, the costs of operating a refrigerated truck are greater than a non-refrigerated truck. Backhauls, whether by the farmer or by the intermediary, affect the costs attributed to the delivery of produce (e.g., one-way costs versus roundtrip costs). Even road conditions and their impacts on travel speed and vehicle/tire wear impact distribution costs.
Determining vehicle operating costs

What are the true costs of operating a vehicle? This question has been and remains to be the cause of lengthy debates and detailed research efforts. The type of vehicle, fuel economy, tire costs, insurance expense, expected annual maintenance costs and road conditions all affect the true costs of operation. For some, the best proxy for per-mile operating costs is to use a reported estimate, such as the IRS allowable mileage rate for expenses. For others, the Farm-to-School Distribution Cost Template may be used to establish an operation-specific estimate.

Fuel economy

Fuel economy is probably the easiest and most commonly measured vehicle operating expense: start with a certain level of fuel in the vehicle, drive a specific distance and find out how many gallons of fuel were needed. Stated fuel economy estimates (miles per gallon) for modern vehicles, or owner knowledge of fuel efficiency from operating the vehicle, and a current price of fuel make fuel-per-mile costs easy to estimate.

Vehicle tire costs

Many factors may go into determining the tire costs per mile of travel: style of tire, the amount of highway travel versus non-paved travel, hills and curves versus flat ground and straight roads, tire inflation level, vehicle weight and wheel alignment. The template asks users to consider these factors, but in a simple, straightforward manner: What would (did) it cost to purchase a new set of tires for your delivery vehicle? How many miles of travel do you expect to get from that set of tires? Although the possibility of road hazards may drastically shorten the useful life of a set of tires, the vehicle’s owner can anticipate from past experiences roughly how long a set of tires should last.

Maintenance, repairs and insurance costs

Expenses for maintenance and repairs may be accounted for by using annual estimates from manufacturers or auto industry organizations. These estimates are typically based upon the make and model of the vehicle and vary by age of the vehicle. On the other hand, the vehicle owner may base these cost estimates on a budgeted amount for annual maintenance and repairs, taking into account variations in the costs of repairs that may be performed on the farm and those that might require the services of a trained mechanic. Maintenance costs also may include the annual costs of vehicle registration/tags and legally-required insurance coverage. An annual estimate of these costs, divided by the expected number of miles driven for the year, provides an appropriate estimate of these expenses per mile of operation.

Depreciation

The useful life and value of a vehicle is a function of age (years owned) and miles driven. A vehicle with an expected operating life of 10 years is not necessarily worth half its original value after 5 years. Similarly, a vehicle with an expected operating life of 200,000 miles is not necessarily worth half its original value after 100,000 miles of use. While it is possible to estimate vehicle depreciation over time using a straight-line method (value of the vehicle divided evenly over a period of years) or per mile by a straight-line method (value of the vehicle divided by the expected mile-life), these methods may not accurately capture the current depreciation rate of the vehicle.
A more precise method for capturing vehicle depreciation expense is to incorporate both age and miles driven. Most business-use vehicles are depreciated on the books according to the MACRS (Modified Accelerated Cost Recovery System) accounting method. The MACRS method accounts for the fact vehicles lose more value in their early years than in their later years. Older vehicles, because they have already been partially or fully depreciated by the business, do not lose as much market value per year or as the result of having a few more miles on the odometer.

The template allows for either a straight-line or MACRS depreciation method to capture the fixed costs of vehicle ownership. The user inputs the amount of depreciation for the year, whether that be determined by the straight-line or the MACRS method, and the expected miles driven for the year. Older vehicles may have very little or no depreciation expense per year, but may conversely have much higher annual maintenance and repair costs than a newer vehicle.

**Determining labor costs**

The template allows users to capture the costs of labor associated with making produce deliveries. For producers using hired help to make deliveries, the template requests information about the length of the trip based on miles traveled, driving speed and the time required to drop off produce at each delivery point.

For producers personally making deliveries, labor costs may be accounted for in two ways. If the producer chooses to input the value of his/her time as the labor rate, the computed labor cost represents an opportunity cost, or the value of time that could have been used elsewhere on the farm. However, the producer may choose to treat the delivery activity as being directly related to his/her farm activities for the crop. In this case, no labor costs are estimated by the template. The producer would need to subtract all production costs from the “farm gate” margin provided by the template to determine the returns to his/her direct labor and farm management.

**Suggested information sources**

The introductory segment of the template suggests a few sources of information for determining distribution costs. In addition to the provided references, the template user also may be able to get more state-specific vehicle operation costs from state agencies such as the state agriculture department, state department of transportation and/or the state department of commerce. The Distribution Cost Template is available in a downloadable format www.okfarmtoschool.com/resources/fts-distro-foodsafetymanual.

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**Produce Calculator**

For any FTS program, it is important that the buyers (school nutrition program directors) and farmers communicate effectively and efficiently regarding the quantities of desired produce. Food service providers typically calculate their produce needs in terms of number of servings and the cost per serving. Farmers usually market their fruits and vegetables on the basis of pounds or cases/cartons that represent a set number of pounds. A Produce Calculator program has been developed to help producers and food service providers calculate quantities and costs of various fruits and vegetables needed by a school food program. This spreadsheet-based program calculates poundage needed from a farmer based on the school’s desired number of servings and serving size. This calculator also calculates the per serving cost based on the price of the produce. Conversion calculations for produce have been taken from the USDA Food Buying Guide for Child Nutrition Programs. Use of the program is very simple:

1) Provide the number of servings to be prepared, based on 1/4 cup or 3/8 cup serving size, and the price per pound of the selected produce item.
2) The Produce Calculator quickly calculates the pounds of produce needed to provide that number of servings and the cost per serving.
3) For some items, such as melons, the Produce Calculator can estimate the number of melons to be purchased using a standard melon size/weight. For berries, the Produce Calculator similarly estimates the quantity in quarts of berries to be ordered by the school.
4) For larger serving sizes, such as 1/2 cup portions, simply double the 1/4 cup quantities and cost per serving.

This calculator can be useful for schools, colleges/universities, caterers, restaurants, day care facilities and other venues where fresh fruits and vegetables are served. The Produce Calculator is available in a downloadable format at www.okfarmtoschool.com/resources/fts-distro-foodsafetymanual. The Produce Calculator was collectively developed by the following individuals for the Oklahoma FTS program:

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**Chris Kirby**
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Tips, Tools & Guidelines for Food Distribution & Food Safety