

Selling Local Foods in Missouri



Produce Auctions

Selling Local Foods in Missouri

Contributing authors

Darla Campbell

Agricultural Business Specialist

Lorin E. Fahrmeier

Farm to Institute Project Coordinator

Debi Kelly

Horticulture and Community Development Specialist

Londa Nwadike

State Food Safety Specialist

Jennifer Schutter

Horticulture Specialist

UNIVERSITY OF MISSOURI



Issued in furtherance of the Cooperative Extension Work Acts of May 8 and June 30, 1914, in cooperation with and funded in part by the U.S. Department of Agriculture. Director, Cooperative Extension, University of Missouri, Columbia, MO 65211 • MU Extension provides equal opportunity to all participants in extension programs and activities, and for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of race, color, national origin, ancestry, religion, sex, sexual orientation, gender identity, gender expression, age, genetic information, disability, or protected veteran status • 573-882-7216 • extension.missouri.edu

Acknowledgements

Project editors

Robert Kallenbach

Assistant Dean, Agriculture and Natural Resources Extension
Agronomy State Specialist

Wayne Prewitt

Regional Director, West Central Region

Project coordinator

Jessica Gordon

Curriculum and eLearning Specialist

Review by peers is a process through which researched-based publications are scrutinized by other experts in the same field. This procedure encourages the authors to meet the accepted high standards of the discipline, prevents inadvertent errors, and results in high quality publications. Authors and editors gratefully acknowledge the following peer reviewers for their expert knowledge and contributions to *Selling Local Foods in Missouri*:

Sarah Browning, Extension Educator, University of Nebraska Extension and
Jason Griffin, Associate Professor, Kansas State University

Preface

Selling Local Foods in Missouri

Selling is as important to fruit and vegetable growers as a high yield. Producing fruits and vegetable crops is often relatively easy, but finding a market or optimal combination of markets can be challenging. Low transportation costs and the ability to produce vine-ripe, fresh fruits and vegetables give Missouri growers a competitive advantage in marketing many types of vegetables. Season-extending technology, such as high tunnels, can expand the growing and marketing windows of many Missouri-grown fruits and vegetables. Missouri growers can grow varieties and types of fruits and vegetables that cannot be found on the average supermarket shelf.

Many market outlets are available to Missouri growers. These include community farmers' markets, "u-pick" (pick-your-own) sales, on-farm or roadside markets, wholesale produce auctions, restaurants, institutional sales, marketing cooperatives, supermarket sales and community-supported agriculture or subscription farming.

Selling Local Foods provides beginning growers, and existing growers that would like to diversify, with general information and tools to make important production and business decisions. Selling Local Foods will help you make informed decisions regarding new crops, diversifying your current operation, or adding value added products, and help you determine the best venue for selling your local crop.

Selling Local Foods puts you in the fast lane for success as a commercial producer. So be sure to take the first four modules, since these offer you a solid foundation for your dreams and plans of becoming a commercial grower.

Here's what they offer:

- 90 minutes will fly by in our *Business Planning, Budgets and Liability* module. Business planning provides information and resources for anyone in or considering commercial production. You'll also get hands on experience writing your business mission statement, business plan and goals.
- *Food Safety and Food Label Claims* functions hand-in-hand with *Produce Care and Management*. Food Safety is a fast-paced, 90-minute session that will cover best food safety practices from your field to market. Produce Care spends a quick 30 minutes providing details and resources to make sure your production efforts arrive at market in top form to command the best price! You must get these two modules so you can navigate regulations and deliver the freshest and safest products to your customers.
- If you sell direct-to-consumer, through a distributor, have a farm stand, or sell through any other venue, *Customer Service and Merchandizing* offers a wealth of customer service and marketing tips and resources in this 45-minute module. Communication and relationships are key – no matter where you sell.

Did you know: research has proven that selling through multiple venues is the No. 1 key to profits for most successful local market growers? So we offer you nine, 30-minute modules, each providing an overview of different sales venues. These modules will guide you through the ins and outs of selling -- from Amish and Mennonite produce auctions to agritourism and farm stands. Take advantage of as many modules as you can; they will help you make informed decisions and choose sales venues to put money in your pocket, right from the start.

Our sales venue modules include:

- *Selling at Farmers' Markets*—Have you dreamed about one day selling at a farmers' market? Come to this session to learn about the advantages, and yes, disadvantages of selling at a farmers' market. We'll provide you with information you need to decide if selling at a farmers' market is right for you.
- *Community Supported Agriculture (CSA)*—Why do a CSA? What are some of the common misconceptions regarding CSAs? Did you know there are multiple CSA business models, and advantages and disadvantages related to each? After you complete this module you'll know ways target, develop, grow and retain your CSA customers.
- *Produce Auctions*—How did produce auctions get started? How many auctions are in Missouri? Who do I contact? What are their regulations? Facilities? Come learn about

the many facets of selling at a produce auction. Find out how an auction might be a great venue for your products.

- *Selling to Institutions*—What is an institution? There are more kinds than you might think. In this module you'll discover how to get your foot in the door and the benefits of partnering with different types of institutions. You'll discover how selling to an institution can foster community relationships and open the door to a variety of other marketing channels.
- *Selling to Restaurants*—Our Selling to Restaurants module will describe all of the benefits and unique opportunities associated with selling to restaurants. You'll hear directly from chefs what is important to them and how to get started. We'll include some key resources to make planning and communicating with chefs just that much easier.
- *Selling to Grocery Stores*—This session will provide you with some key tips for selling to grocery stores. This module will dive into the specific topics you need to consider if you sell to grocers including producer-retailer relationships, pricing, packaging, quality, and quantity.
- *Selling Wholesale/Food Hubs*—Learn about the different types of wholesalers and the advantages of marketing through distributors. We'll explain food hub classifications and identify potential challenges you might face when selling to wholesalers so that you are prepared. Wholesale appeals to many farmers because it allows you to focus on what you're good at - production.
- *Kitchens and Other Local Foods*— Did you know that the percentage of meat in a product determines which regulations you need to follow? This module will detail the ins and outs of regulations for jams and jellies to pasta and eggs, meat and jerky. While many farmers think of local foods as produce, you will find that there are other products that you can sell locally.
- *Agritourism, Farm Stands and U-Pick*—This session will explore the crossover between agriculture and tourism industries. You will learn about key ways you can adapt your farm and growing practices so that you can participate in the agritourism industry through u-picks, farm stands, and events.

Don't get surprised by the unexpected. Learn, plan and be proactive to ensure your success whatever sales venues you choose.

Selling Local Foods In Missouri



UNIVERSITY OF MISSOURI
 Extension

What is a Produce Auction?

In this presentation you will learn the origin, function and details for selling produce and agricultural products at a produce auction.

Selling Local Foods-Produce Auction

- A produce auction is a market outlet for locally produced wholesale products.
- Fresh produce, and a variety of other agricultural products, are offered for sale to the highest bidder.
- Sellers are charged a commission, usually a percent of sales, to cover the auction's operating expenses.

A produce auction is a market outlet for locally produced wholesale products. Fresh produce as well as a variety of other agricultural products, such as straw, bedding plants, container-grown plants, etc., are offered for sale to the highest bidder. Each seller is charged a commission, typically 8-12% to cover the auction's operating costs.

Origin of Produce Auctions



- Evolved from commercial auctions in states like New Jersey, Arkansas, Texas & Georgia.
- Were considered 'last resort' sales.
- First auction in Leola, Pennsylvania in 1984.

Produce auctions evolved from commercial auctions in states like New Jersey, Arkansas, Texas and Georgia. They were considered last resort sales. The first auction was held in Leola, Pennsylvania in 1984.

Origin of Produce Auctions



Produce auctions focus on wholesale quantities and quality. Farmers were transitioning out of tobacco, and Amish and Mennonite growers wanted a business centered around the community.

Function of Produce Auctions

- Brings together buyers and growers.
- Auction collects money and pays growers promptly
- Allows growers to focus on growing, reducing travel and marketing time.
- Buyers hone their skills on smart purchasing and marketing.



Produce auctions bring together buyers and growers. The auction collects money from the products sold and pays the growers promptly. These auctions allow growers to focus on growing and reduces travel and marketing time. Buyers hone their skills on smart purchasing and marketing.

Function- facility specifics

- Most produce auctions are an open air shed.
- Wide floor space and drive through lanes.
- Most have pallet jacks, carts, forklift, dollies.



Most produce auctions are an open air shed. They have wide floor space and drive through lanes. Most auctions have pallet jacks, carts, forklifts and dollies move products around.

Function- facility specifics

- All have loading docks, usually at several heights.
- A food stand is often open during auction times.
- Will double as a place to store and distribute grower packing supplies such as boxes.



All produce auctions have loading docks, and most have a food stand open during auction times. The produce auction will double as a place to store and distribute packing supplies such as boxes and produce cartons.

Function of Produce Auctions

- Packing & grading standards facilitate transaction efficiency, as does layout of facility.
- Each auction develops its own packing and grading standards.
- They are not USDA standards and are not inspected.

The layout of the facility and the packing and grading standards facilitates transaction efficiency. Each auction develops its own packing and grading standards. They are not USDA standards and are not inspected by the USDA or Department of Agriculture, but they could be inspected by the local health department which has its' own regulations.

Examples of auction packing standards

- Eggplant-pick in tender stage, not old and leathery. Classic types.
- Potatoes-new potatoes gently clean, but do not scrub.
- Rhubarb-½ pound bunches in ½ bushel boxes Trim 75% of leaf.



Each auction determines its' packing and grading standards. For example: eggplant should be picked in the tender stage, not old and leathery, and classic types of eggplant are accepted. New potatoes should be gently cleaned, but not scrubbed. Rhubarb should be in ½ pound bunches in ½ bushel boxes, and 75% of the leaf should be trimmed.

Examples of auction packing standards

- Turnips-leave about 1" top.
- Cucumbers-½ bushel boxes 40-45 count to full box. Pack oversize and odd shapes separate.



Turnips should have a 1" top, and cucumbers should be placed in ½ bushel boxes with 40-45 per box. Oversized and odd shaped cucumbers should be packed separate.

Business and Management

- All the auctions in Missouri and Iowa are associated with an Amish or Mennonite community.
- Often a marketing cooperative (a grower-member owned organization). Often using a LLC structure.
- Generally governed by a small board made up of prominent growers.
- Most have a manager, auctioneer, and clerical help.
- Some may hire help to assist buyers with loading.



All of the produce auctions in Missouri and Iowa are associated with an Amish or Mennonite community. Often they are set up as a marketing cooperative using a Limited Liability Company (LLC) structure. They are generally governed by a small board made up of prominent growers. Most produce auctions have a manager, auctioneer and clerical help. Some may hire extra help to assist with loading.

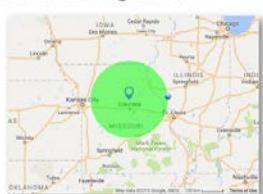
Business and Management

- Growers and buyers are issued permanent numbers.
- All lots are labeled. Sale price is recorded for each lot.
- Usually has grower policies and procedures; may have for buyers.
- Auction revenue is from its commission (8 to 12%).



Growers and buyers are issued permanent numbers. All lots are labeled. The sale price is recorded for each lot. A produce auction usually has grower policies and procedures. There may be policies for buyers too. The auctions revenue is from is commission, usually 8-12%.

Business and Management



Most auctions set a farm proximity, often within 100 miles. Local produce is generally harvested within 24 hours. Days of operation are Monday-Friday, typically with 2-3 sales per week. Start times are typically mid-morning, noon or late afternoon. This map shows a 100 mile radius around Clark, Missouri.

Business and Management



Most produce auctions have a ‘no’ ‘no’ sale policy. Everything must go! Smaller lots and baked goods are usually sold last. A small lot might consist of one small box of tomatoes of different sizes, two quart boxes of new potatoes, or one hanging basket. Some produce auctions have unique sale events and may sell novelties from time to time. An example would be a special plug sale in early spring, bedding plant sales in April and May, and pumpkin and craft sales in the fall.

Advantages of Selling to Produce Auctions

- It is an efficient market outlet for growers who don't have time to market their produce.
- Both top and low grade produce can be sold at the auction.
- Transaction costs are lowered because produce is transported to a central facility for market.



There are several advantages to selling local foods to a produce auction. It is an efficient market outlet for growers who don't have time to market their produce. They can transport it to a central facility to be sold. Both top and low grade produce can be sold and transaction costs are lower.

Disadvantages of Selling To Produce Auctions

- Prices can vary.
- Prices often fall below cost during heavy production time.
- Growers should use the auction system throughout the growing season to get the most out of the changing prices.



There are a few disadvantages of selling local foods to a produce auction. Prices can vary. Prices often fall below cost during heavy production time. Early in the season you might get \$55 for a box of large tomatoes, and by August you might only get \$15 when every grower is trying to sell tomatoes. To get the most out of the changing prices, a grower should use the auction system throughout the growing season.

Locations in Missouri



There are eight produce auctions in Missouri. They include the Clark Produce Auction, North Missouri Produce Auction, Central Missouri Produce Auction, 4-County Produce Auction.

Highway C Produce Auction, Leadmine Produce Auction, Barton County Produce Auction, Highway 60 produce Auction, and there is a produce auction near Drakesville, Iowa, just over the Missouri border, called the Southern Iowa Produce Auction where some Northeast Missouri growers sell their produce.

Central MO Produce Auction

- 37808 Highway E, Fortuna, MO (nearby 'Versailles')
- Location: 35 miles Southwest of Jefferson City
 - Year formed: 1994 as a LLC (Limited Liability Company)
 - Approximate annual sales: \$2.5 million
 - Approximate number of main growers: 25



The Central Missouri Produce Auction is located 35 miles southwest of Jefferson City near Versailles. It was formed in 1994 as a Limited Liability Company (LLC). Approximate annual sales are \$2.5 million. There are approximately 25 main growers that sell to the auction.

Central MO Produce Auction

- 37808 Highway E, Fortuna, MO (nearby 'Versailles')
- Affiliated with Old Order Mennonite group
 - Noted for spring plug and plant sales including bedding plants & hanging baskets, tomatoes and melons
 - Has a phone including a market report recording and web page
 - [Central Missouri Produce Auction, Inc.
http://agebb.missouri.edu/hort/auction/central.htm](http://agebb.missouri.edu/hort/auction/central.htm)

The Central Missouri Produce Auction is affiliated with an Old Order Mennonite group that moved into the area from 1971 through 1980 mainly from Pennsylvania, Indiana, Kentucky and Wisconsin. This auction is noted for its spring plug and plant sales including bedding plants and hanging baskets, tomatoes and melons. They have a phone, market report and a webpage

<http://agebb.missouri.edu/hort/auction/central.htm>

North MO Produce Auction

- State Highway F, just outside Jamesport
- Location: 20 miles north of Chillicothe
 - Year formed: 2001 as a LLC (Limited Liability Company)
 - Approximate annual sales- \$1 million plus
 - Approximate number of main growers: 40-100 (500 registered)



The North Missouri Produce Auction is located 20 miles north of Chillicothe, just outside of Jamesport. It was formed in 2001 as a LLC. Approximate annual sales are \$1 million. There are approximately 40-100 main growers, but there are 500 registered growers.

North MO Produce Auction
 State Highway F, just outside Jamesport

- Affiliated with Amish
- Some Mennonites and German Baptists are growers
- Produce goes to Kansas City, Des Moines, St. Joseph & others
- Phone 660-684-6844. Market update recording 684-6700
- [Has a web page](#)

<http://agebb.missouri.edu/hort/auction/nomo.htm>

This auction is affiliated with Amish that first moved into the area in 1953 from Iowa, Delaware, Indiana and Kansas. Some of the growers are Mennonite and German Baptists. Produce from this auction typically goes to Kansas City, Des Moines and St. Joseph. The auction has a phone, (660) 684-6844, a market update recording, (660) 684-6700. They also have a webpage

<http://agebb.missouri.edu/hort/auction/nomo.htm>

4-County Produce Auction
 1 mile north of Windsor, MO on WW Highway

- Location: about 25 miles Southwest of Sedalia
- Year formed: 2004
- Grower owned and operated
- Approximate annual sales: \$700,000 to 900,000
- 200 plus registered growers, fewer than a fourth of these sell on a regular basis



4-County Produce Auction is located one-mile north of Windsor, Missouri, about 25 miles southwest of Sedalia. It was formed in 2004 and is grower owned and operated. It has annual sales of approximately \$700,000-900,000. There are over 200 registered growers, but fewer than a fourth of them sell on a regular basis.

4-County Produce Auction
 1 mile north of Windsor, MO on WW Highway

- Affiliated with Amish that moved into area in 1975
- Noted for tomatoes, sweet corn, cucurbits, flowers
- Destination of produce: Kansas City area school districts, farmers markets, regional and national chain grocery stores in Kansas City area, Wal-Mart, other non-Amish produce retailers
- No phone. Has a [web page](#)

<http://agebb.missouri.edu/hort/auction/fourcounty.htm>

4-County Produce Auction is affiliated with an Amish group that moved into the area in 1975. Most came from Ohio and Kentucky. It is noted for tomatoes, sweet corn, cucurbits and flowers. Produce from this auction ends up in the Kansas City School districts, farmers' markets, regional and national grocery store chains in the Kansas City area, Wal-Mart, and with other non-Amish retailers. The produce auction does not have a phone. They have a webpage

<http://agebb.missouri.edu/hort/auction/fourcounty.htm>

Clark Produce Auction
 1966 Highway Y Clark, MO

- Location: 20 miles north of Columbia.
- Year formed: 2003
- Approximate annual sales: \$500,000
- Approximate number of main growers: 25
- Affiliated with Amish that moved from Hazelton, Iowa in 1954



The Clark Produce Auction is located 20 miles north of Columbia in Clark, Missouri. It was formed in 2003 and has approximate annual sales of \$500,000. There are 25 main growers that sell to the auction. The auction is affiliated with an Amish group that moved in from Hazelton, Iowa in 1954.

Clark Produce Auction
 1966 Highway Y Clark, MO
[Has a web page](#)



The Clark Produce Auction is noted for a nice variety of field vegetable crops, high tunnel tomatoes and ornamentals. They have an annual fall craft and pumpkin sale. Most produce from this auction goes to Columbia and its vicinity. They do not have a phone. They have a webpage

<http://agebb.missouri.edu/hort/auction/clark.htm>

**Highway 'C' Produce Auction
State Highway Short P, Seymour, MO**

- Location: 35 miles east of Springfield
- Year formed: 2008
- Owned by 7 families
- Approximate annual sales-\$200,000 plus



The Highway C Produce Auction is located 35 miles east of Springfield near Seymour, Missouri. It was formed in 2008 and is owned by 7 families. It does approximate \$200,000 in annual sales.

**Highway 'C' Produce Auction
State Highway Short P, Seymour, MO**

- 240 registered growers
- Affiliated with one old order Amish group
- Noted for a nice variety
- Primarily retail sales
- No phone or web page



There are 240 registered growers. It is affiliated with old order Amish. It is noted for having a nice variety of items for sale. They have no phone or website.

**Leadmine Produce Auction
839 State Road T, Leadmine, MO**

- Location: 30 miles north of Buffalo (close to Tunas)
- Year formed: 2010, church partnership
- First sales: 2011
- Approximate annual sales-\$400,000
- Approximate number of main growers: 25 too 30



The Leadmine Produce Auction is located 30 miles north of Buffalo, Missouri. It was formed with a church partnership in 2010. First sales were in 2011. Approximate annual sales are \$400,000. There are approximately 25-30 growers.

**Leadmine Produce Auction
839 State Road T, Leadmine, MO**

- Affiliated with old order Mennonite group that moved in 1969 from Pennsylvania and Maryland
- Noted for a nice variety
- Primarily retail-small stores, peddlers; a few wholesale buyers
- No phone
- Has a [web page](#)

<http://agebb.missouri.edu/hort/auction/leadmine.htm>

The Leadmine Produce Auction is affiliated with an old order Mennonite group that moved into the area in 1969 from Pennsylvania and Maryland. They are noted for having a nice variety. Buyers are primarily retail small stores, peddlers and a few wholesale buyers. They do not have a phone. They have a webpage

<http://agebb.missouri.edu/hort/auction/leadmine.htm>

**Barton County Produce Auction
669-A NW 30th Lane, Lamar, MO**

- Location: 8 miles north of Lamar at 669-A NW 30th, Lamar, MO
- Year formed: 2011
- No phone
- Has a [web page](#)

<http://agebb.missouri.edu/hort/auction/barton.htm>



The Barton County Produce Auction is located 8 miles north of Lamar. It was formed in 2011. It does not have a phone. It has a webpage

<http://agebb.missouri.edu/hort/auction/barton.htm>

**Webster County Produce Auction
8011 Berry Road, Seymour, MO**

- Year formed: 2012
- Noted for fresh locally grown flowers, bedding plants, and produce by local farmers
- Has a [web page](#)

<http://agebb.missouri.edu/hort/auction/webster.htm>



The Webster County Produce auction is located near Seymour, Missouri and was formed in 2012. It is noted for fresh locally grown flowers, bedding plants and produce by local farmers. It has a webpage

<http://agebb.missouri.edu/hort/auction/webster.htm>

Southern Iowa Produce Auction 19141 Ice Ave, Bloomfield, IA

- Location: 12 miles north of Missouri border near Drakesville, Iowa
- Year formed: 2004
- Affiliated with Amish
- Generates an estimated \$91,000 in annual revenue
- Contact: Daniel Beechy at 641-722-3623



The southern Iowa produce auction is located 12 miles north of the Missouri border near Drakesville, Iowa. It was formed in 2004. It generates an estimated \$91,000 in annual revenue. Contact Daniel Beechy at (641) 722-3623 for more information.

Summary

- Efficient market outlet for growers who don't have time to market their produce.
- Allows growers to focus on 'growing', reduces travel and marketing time.
- Both top and low grade produce can be sold at the auction.
- Focused on wholesale quantities and quality.
- Most set a farm proximity limit (e.g. within 100 miles).
- Prices can vary.

In summary, produce auctions are an efficient market outlet for growers who don't have time to market their produce. It allows growers to focus on growing and reduces travel and marketing. Both top and low grade produce can be sold at the auction. A produce auction is focused on wholesale quantities and quality. Most auctions set a farm limit within 100 miles. Prices can vary throughout the season.

Resources

- Marketing Vegetables In Missouri
 - <http://extension.missouri.edu/p/g6221>
- Missouri Produce Auctions
 - <http://agebb.missouri.edu/hort/auction/>
- University of Kentucky College Of Agriculture, Food And Environment- Produce Auctions
 - http://www.uky.edu/Ag/CCO/marketing/auctions_p.htm



Several resources are available with information on produce auctions. These include the University of Missouri Extension guide on "Marketing Vegetables In Missouri" found at <http://extension.missouri.edu/p/g6221>; Missouri Produce Auctions at <http://agebb.missouri.edu/hort/auction/>; and the University of Kentucky College of Agriculture, Food And Environment.

Glossary of Terms

Acidified canned food	A food whose ingredients are primarily naturally not acidic ($\text{pH} > 4.6$) that are acidified with vinegar or lemon juice before canning. This includes pickled vegetables and other products. To sell these products at room temperature, a process review and attendance at Better Process Control School is required.
Better Process Control School (BPCS)	Better Process Control School is required for selling some shelf stable canned foods. The course either includes two days (only for acidified foods) or four days (for selling low acid canned foods).
Clean	The removal of dirt and debris.
Commercial kitchen	Typically, this is a food processing facility that uses commercial-size equipment for preparing food and is typically not a home kitchen used for regular family use. Note that if a processor needs a food safety license to sell a particular food, they need to obtain such license for themselves, even if someone else using the same facility has a license, unless that person is willing to take on the liability for another processor.
Co-packer	A contracted processing facility that manufactures and packages food products for a client based on the client specifications.
Crisping	Refreshing harvested fresh produce in water or sprinkling leafy commodities with water or ice to restore moisture content.
Farmers' Market	RSMo. 144.527.2 defines a farmers' market as "Individual farmers or a cooperative or nonprofit enterprise or association that consistently occupies a given site throughout the season, which operates principally as a common marketplace for an individual farmer or a group of farmers to sell farm products directly to consumers, and where the products sold are produced by the participating farmers with the sole intent and purpose of generating a portion of household income."
Under this definition farmers' markets include but may not be limited to:	
<ul style="list-style-type: none">• One or more producers at any location• Roadside farm stands or farmers selling directly from their home• Community Supported Agriculture (CSA's)• Agritourism operations• Any operation where farmers sell farm products from their farms directly to consumers with a logical pattern• Both the act of organization or assembly and the individual participants may be considered farmers' markets.	

It is important to recognize the separation between markets as a common marketplace and markets as individuals and entities. The laws and

	regulations governing a farmers' market as a common marketplace are determined by the market's organizational structure and the activities the market (organizing body) performs under applicable state and local laws. The laws governing vendors are determined by their legal incorporation and the types of products and services they provide under applicable state and local laws, whether they qualify as a farmers' market themselves or not.
FDA	The United States Food and Drug Administration. Generally, responsible for regulating all food products other than meat and poultry.
Food Hub	A centrally located facility with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products.
Food Safety Modernization Act (FSMA)	A law signed in January 2011. It includes final rules released in 2015 on produce safety, as well as processed food safety. This is the first time that there have been governmental regulatory requirements for selling fresh, whole produce. More information is available from http://missourifamilies.org/foodsafety/newsletters/ or www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm
fresh-cut	"...any fresh fruit, vegetable or combination that has been physically altered from its original form, but remains in a fresh state."
GAPs	Good Agriculture Practices. For the purposes of USDA's GAPs program, GAPs applies to produce growing, harvest, packing, and transportation. If a product is GAP certified, the grower has passed an audit that they are using good food safety produce growing practices. Note that GAPs is not a regulatory requirement, but may be required by a buyer.
GFSI	The Global Food Safety Initiative. Some buyers may request that producers pass one of the GFSI- recognized 3 rd party audits for food safety. Some of the auditing schemes recognized by GFSI include Primus and Safe Quality Food (SQF).
GMPs	Good Manufacturing Practices- the basic sanitary and processing requirements necessary to ensure the production of safe food. Implementing these is essential to meeting FDA and USDA food safety requirements.
Grocery Store	A market outlet for distribution of local food products for retail sale to consumers.
Group GAPs	A USDA food safety certification program which officially began April 3, 2016. Under the program, growers of any size can be USDA-GAP certified as a group.
HACCP	Hazard Analysis and Critical Control Points. A HACCP plan and implementation program is a regulatory requirement for meat and poultry

	products, seafood, some juice, some vacuum-packed products, and by some food buyers.
High acid canned food	The natural pH of the product is ≤ 4.6 . This includes most fruits and naturally fermented foods. No process review is required but pH records must be kept.
Hydro-Cooling	When warm produce is cooled directly by chilled water, the process is known as hydro-cooling.
Incubator kitchen	A kitchen facility that can be utilized by start-up or other food businesses. May also be considered a “community” or “shared-use” kitchen. Note that generally, if a food product requires a food safety license to sell, the processor would still need to obtain such license for themselves, even if someone else using the facility has a license, unless that person is willing to take on the liability for another processor.
Local	There is currently no uniform national definition for this term. However, if the term is used, it must be truthful and not misleading. The 2008 Farm Act defined this term as < 400 miles from the origin.
Low acid canned food	A food product that has a natural pH of greater than 4.6. This would include canned vegetables and meats packed in water. To sell these products at room temperature, a process review, attendance at Better Process Control School, and commercial retort canning are required.
Natural	USDA defines “natural” related to how a meat product was processed, stating that it is “minimally processed and contains no artificial ingredients.” FDA does not currently have a definition for natural. However, FDA “has not objected to the use of the term if the food does not contain added color, artificial flavors, or synthetic substances.”
Organic	For any food product to be labeled as “certified organic” or “USDA Organic,” they must be certified to meet all the requirements of the <u>USDA National Organic Program</u> .
pH	A measure of the acidity of a food product, which has a major impact on the microbial safety of the product, since some organisms do not grow well in acidic conditions.
Potentially hazardous food	Often commonly called “perishable” foods. A food that is natural or synthetic and that requires temperature control because it is in a form capable of supporting hazardous microorganisms.
Produce Auction	A market outlet for locally produced wholesale products. Fresh produce, as well as a variety of other agricultural products, are offered for sale to the highest bidder.

Restaurant	A market outlet for locally produced food to be sold and prepared for consumption by consumers.
Sanitize	Treating to reduce the amount of bacteria on a surface.
Trimming	Removing the parts of harvested fresh produce which are most likely to deteriorate. It removes the dried plant fluid that seeps out after harvesting which clog the plants pores, not allowing for proper hydration, and it removes those parts that detract from taste and eye appeal.
USDA	The United States Department of Agriculture. Generally responsible for regulating meat and poultry products and also perform other roles supporting agriculture, such as conducting Good Agricultural Practices (GAP) audits.
Water activity	Water activity is a measurement of the water available for the growth of microorganisms in a food product. It is affected by moisture content, as well as salt and sugar content of the product. It ranges from 0 to 1 (distilled water is a w_1).

Marketing Vegetables in Missouri



Figure 1. Farmers markets provide an easy, convenient way for producers to interact with people interested in fresh, local fruits and vegetables.

Marketing is as important to vegetable growers as a high yield. Producing vegetable crops is often relatively easy, but finding a market or optimal combination of markets can be challenging. Low transportation costs and the ability to produce vine-ripe, fresh vegetables give Missouri vegetable growers a competitive advantage in marketing many types of vegetables. Season-extending technology, such as high tunnels, can expand the growing and marketing windows of many Missouri-grown vegetables. Missouri vegetable growers can grow varieties and types of vegetables that cannot be found on the average supermarket shelf.

Many market outlets are available to Missouri vegetable growers. These include community farmers markets, "u-pick" (pick-your-own) sales, on-farm or roadside markets, wholesale produce auctions, restaurants, institutional sales, marketing cooperatives, supermarket sales and community-supported agriculture or subscription farming.

When choosing suitable market outlets, consider factors such as the volume of produce you will be growing; the time you have available for marketing during the growing season; your willingness, time and ability to deal with customers directly; the perishability of your crops; price levels and price stability of the market; and barriers to market entry and expansion.

Revised by
David H. Trinklein, Horticulture State Specialist, Division of Plant Sciences

Farmers markets

Farmers markets are excellent outlets for directly marketing fresh, local produce to people in the community. Farmers markets support local farmers and promote healthy eating habits while fostering community development. Farmers markets are an excellent way for consumers to connect with food providers. By interacting with growers, consumers learn how food is grown, discover new types of vegetables and even learn how the vegetables can be prepared to preserve their nutritional value. Most consumers shop at farmers markets for freshness, diversity and the opportunity to support local farmers.

Farmers markets are well suited to small, individual lots of mixed produce. Strict grading and packaging of produce are not required, and items grade two or lower can often be sold with ease. Farmers markets are relatively easy markets to access and do not require a significant amount of startup capital. Most farmers markets require vendors to grow their products within a certain distance from the market and will often have rules and regulations governing how the items are sold. A space or booth rental fee may be required to sell at the market. Most farmers markets are centrally located, open-air markets within a community, so advertising by grower-vendors is not necessary. Farmers markets are compatible with off-farm employment because most market days occur on evenings or weekends.

Because farmers markets are well suited to small volumes of produce, they may not be the sole market outlet for a large-scale vegetable grower. Obtaining a premium price for produce at a farmers market may be difficult if there is



Figure 2. Pick-your-own marketing works best with crops for which it is easy to identify harvest maturity.

competition for the same item. Farmers markets are usually seasonal and transient, often opening in April and closing by November. However, covered farmers markets may be available year-round. Farmers markets require a significant amount of time for marketing the produce and may not be an efficient use of time for all growers. Missouri has more than 100 community farmers markets. To find a farmers market in your area, consult the Missouri Farmers Market Association.

U-pick marketing

U-pick, or pick-your-own, marketing is popular for vegetables such as asparagus, green beans, peas, sweet corn, pumpkins and tomatoes (Figure 2). Most growers use u-pick to market vegetables for which pickers can easily recognize harvest maturity. Some growers open fields at the end of the harvest season to u-pick customers to clean up the fields.

U-pick marketing of vegetables is not capital-intensive and works well for perishable vegetables. U-pick lowers costs for labor, transportation, packaging and marketing but requires time for supervising customers. In sparsely populated rural areas, u-pick may not be a successful market outlet. And because the grower is inviting the public onto the farm, accident liability insurance may be required.

One of the challenges with u-pick marketing is coordinating harvest frequency with customer volume.

Advertising is essential to maintain a steady flow of customers to the farm. Consideration must be paid to parking and traffic flow on the farm. Pickers must be supervised and shown the proper way to harvest each crop to maximize marketable yield without damaging the plants.

On-farm or roadside markets

Many Missouri vegetable growers sell their produce through on-farm stores or roadside stands (Figures 3 and 4). This method works particularly well in high-traffic areas. Generally, this form of marketing is not capital-intensive and is easy to access. The on-farm store can also be used to sell a variety of products — vegetables, fruits, processed vegetables and crafts — produced on the farm or from neighboring farms.

Many roadside markets are seasonal and benefit from a steady supply of quality produce. Some roadside stands purchase produce from other growers in the region to supplement or diversify their sales volume. Operation of the stand requires labor through the season, and packaging and grading requirements are stricter than at a farmers market. Rules and regulations such as health permits, weights and measures standards, parking, sales taxes, handicap access and sanitation must be considered before starting the market. The market should be clean and neat and have a variety of produce to choose from. Roadside market prices often fluctuate during the season, based on local supply.

Grower organizations

Missouri Farmers Market Association
710 S. Hickory St.
Mt. Vernon, MO 65712
417-708-1909

Missouri Farmers Union
15593 Road 245
Langdon MO 64446
573-659-4787 or 660-787-0222

Missouri Organic Association
20547 Creek Road
Bunceton, MO 65237
660-427-5555 or 573-619-9139

Missouri Vegetable Growers Association
100 E. Newton St., 4th Floor
Versailles, MO 65084
573-378-5358

For farmers market locations, visit <http://agebb.missouri.edu/fmktdir>.

Wholesale produce auctions

Missouri has four wholesale produce auctions. A produce auction is a marketing cooperative organized as a limited liability corporation or general partnership. Each auction has shareholders, usually growers, who provide startup capital for the auction. Produce auctions allow grower-members to wholesale market large volumes of produce in a centralized facility to a diverse group of buyers. Grower-members are expected to grade and package their produce in standardized containers before the auction. Each auction has specific guidelines for grading and packaging produce items. The auction often sells containers or boxes to grower-members. Growers transport the



Figure 3. Roadside stands and on-farm stores are most successful in high-traffic areas.

produce to the auction building the morning of the auction, and the auction commences by midmorning. Growers are responsible for boxing, unloading, stacking and labeling their produce items. The auction is conducted in an open-air shed with wide floor space for loading and unloading produce. The produce can be auctioned in lots positioned on carts on the floor or in a drive-through for bulk wagons or trailers.

Each lot of produce has a card that identifies the type, quantity, grade and, sometimes, variety of vegetable or fruit in the lot. This card is the consignment sheet and is read aloud by the manager or auctioneer before auctioning the lot. Each tag has a number that identifies the grower. Each lot is systematically auctioned to the highest bidder. The auction is designed for wholesale marketing, but small lots of produce are sold at retail prices in a separate section of the auction. Since most buyers want larger volumes of produce, most auctions sell small lots — less than three boxes of any item — last.

Wholesale produce auctions bring buyers and sellers together for a short period of time, several times each week. Most buyers purchase for small supermarkets, roadside stands or restaurants. The auction does not perform any postharvest handling or store any produce, because every lot is sold regardless of price at the day of the auction. Most auctions have a "no no-sale" policy. However, some auctions choose to set a price floor or minimum acceptable price for each lot of produce. A commission of 9 to 12 percent is deducted from the sale price of each lot to fund operating costs of the auction and salaries of the market manager, clerks and other workers in the auction.

Produce auctions are an efficient market outlet for growers who don't have time to market their produce. Both top- and low-grade produce can be sold at the auction. Transaction costs are lowered because produce is transported to a central facility for market. Most produce auctions will only sell produce grown within a 100-mile radius of the auction facility. Produce grown outside the 100-mile radius is considered "shipped or imported produce" and is usually auctioned after local produce.

Wholesale produce auctions serving Missouri growers

Barton County Produce Auction LLC
669-A NW 30th Lane
Lamar, MO 64759
417-681-0123

C-Highway Produce Auction
Short State Highway P
Seymour, MO 65746
417-859-3509

Central Missouri Produce Auction Inc.
37808 Highway E
Fortuna, MO 65034
660-337-6227

Clark Produce Auction LLC
1966 Highway Y
Clark, MO 65243
660-264-4555

Four County Produce Auction
1162 NE 1400 Road
Windsor, MO 65360
660-684-6844

Highway 60 Produce Auction LLC
Seymour, MO 65746
417-935-2791

Leadmine Produce Auction
839 State Road T
Tunas, MO 65764
417-993-0086

North Missouri Produce Auction LLC
32633 State Highway F
Jamesport, MO 64648
660-684-6844

For more information about wholesale produce auctions, visit
<http://agebb.missouri.edu/hort/auction>

Growers who wish to sell produce grown more than 100 miles away should contact the market manager before bringing produce to the auction. During the peak growing season, most produce auctions have two or three sales per week. Often, special auction events are conducted for items such as flowers, bedding plants, small animals, hay or straw, and crafts. The auction system is well suited to relatively nonperishable vegetables and fruits. Given the nature of the auction system, prices can vary, but an auction with low prices is often followed by auctions with high prices. Average seasonal prices for produce at most auctions are usually above wholesale final market prices or prices received from supermarket contracts. Growers should use the auction system throughout the growing season to get the most out of the changing prices.

Marketing cooperatives

Although wholesale produce auctions are marketing cooperatives, other forms of marketing cooperatives can be established in Missouri. Growers in a region who produce similar types of vegetables or use similar growing practices, such as organic, may consider coming together to form a cooperative. A cooperative is a business organization owned by grower-members. Cooperative ventures can be organized as partnerships, corporations, cooperatives or limited liability companies. In Kansas, for instance, eight growers formed a community-supported farm that offered a wide variety of crops and served a larger number of members than could have been done by individual producers. In northeast Iowa, a small number of growers cooperatively own a packing and grading facility and a delivery truck that serves nursing homes and other institutional customers.

Cooperative marketing can offer many benefits to growers. These include specializing in vegetable crops best suited to their soil type, labor availability and management skills; marketing a larger volume of production, which reduces the marketing cost per product and allows access to new markets, such as wholesale distributors; complementing their own skills and abilities with other necessary production, grading and marketing skills; and spreading investment costs in equipment and facilities among a larger number of producers. Most wholesale market outlets desire a consistent quality and quantity of produce. The cooperative structure allows growers to sequence their planting to maintain a steady supply of produce for each market. Using a cooperative, growers are able to label and differentiate their produce. The cooperative can help with harvesting, processing, cooling or freezing, packaging, labeling and transporting produce to market. Growers market a specific quantity of produce through the cooperative relative to how much they have invested. The cooperative has a market manager who coordinates production and seeks new markets for the cooperative. With a diligent market manager and a larger volume of produce, each grower-member spends less time marketing relative to producing the crop. The cooperative can purchase input items, such as fertilizer or seed, in bulk quantities, resulting in significantly lower prices. Labor and equipment for planting and harvesting can be pooled and shared among members of the cooperative.

Depending on its size, a cooperative can have significant capital requirements, such as packing equipment, freezing units and coolers. For the cooperative to succeed, growers must work together and put aside self-interest. A marketing agreement among members that specifies the type and volume of vegetables sold by each member must be implemented. Some cooperatives do not take possession of members' produce but serve only to connect members with buyers. Quality control is essential, and the cooperative must enforce grading and packing requirements. Growers should use the cooperative as the dominant marketing outlet for their vegetables. Growers considering any form

of cooperative entity should read *The Farmer's Legal Guide to Producer Marketing Associations* by Doug O'Brien and co-authors (see the Resources section) and should seek expert legal assistance.

Community-supported agriculture

Community-supported agriculture farms (CSAs) appeared in Missouri in the mid-1990s after being imported from Europe and Japan to the Northeast in the mid-1980s. CSAs are community farms where consumers interested in healthy, safe food enter into an economic partnership with growers seeking stable markets. Consumers pay in advance for a whole season of produce with a membership fee ranging from \$300 to \$600, depending on size of share. In return, members receive a supply of six or more varieties of vegetables on a weekly basis from roughly mid-May until October.

CSAs have traditionally had core groups of consumers who take on some tasks of planning, organizing and other labor — weeding, hoeing, harvesting, marketing, distribution, coordination — in addition to the membership fee. The benefits to growers include sharing the harvest risk with members who join knowing they may receive reduced harvests or variety depending on weather conditions or other problems. Traditional CSAs excel at creating loyal customers and friends, resulting in tremendous community partnerships.

A more common form of CSA in Missouri is subscription farming, which normally eliminates the work requirement for members. These CSAs may charge an advance fee for the entire season, or growers may opt to have a nominal membership fee with weekly or monthly invoices for the market basket provided.

In either form, the greatest benefit of CSA is the financing available from upfront membership fees, which enables the grower to buy seeds, supplies and labor.

CSAs require excellent management skills. Planning is essential to provide the expected variety and quantity of crops through a 20- to 24-week season. Growing such



Figure 4. Roadside stands and on-farm stores should be clean and neat and offer a variety of produce.



Table 1. Summary of market outlets for Missouri.

Market outlet	Farmers market	Roadside market	U-pick market	Produce auction	Market cooperative	Direct store sales	CSA	Institution sales	Restaurant sales
Suitable for large volumes of produce per grower?	No	No	Yes	Yes	Yes	Yes	No	Yes	No
Marketing time required by individual grower	High	Medium	High	Low	Low	Medium	Medium-High	Low	Medium-High
Degree of grower contact with consumers	High	High	High	Low	Low	Low	High	Low	Low
Suitable for very perishable vegetables?	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Price stability	Medium	Medium	High	Low-Medium	High	High	High	High	Medium-High

a wide variety of crops — usually 60 or more different vegetables, herbs, fruits or other crops — throughout the growing season requires knowledge of different growing techniques and carefully planned planting and harvesting, in addition to extra labor. By charging weekly or monthly fees based on the market value of vegetables provided, subscription CSAs exert less pressure on growers to supply a good variety every week than traditional CSAs. Growers considering developing a CSA should have several years of vegetable farming experience and good planning skills to manage the variety of crops, planting and harvesting schedules required to produce vegetables for 20 to 24 weeks. Growers considering a traditional CSA arrangement should also be adept at managing members' labor to make the most of the member work requirement.

Some growers form cooperative CSAs with other vegetable growers or producers of eggs, meat and honey. Such arrangements allow producers to specialize in different crops that are better suited to their land assets and management skills. Cooperative partnerships can take a great deal of time to plan and manage, but much of this can be done during the offseason. CSAs in general have medium to high marketing costs but can help stabilize farm incomes, minimize risk from specific crop failures and provide outlets for extra produce. CSAs are almost always used in conjunction with wholesale outlets or farmers markets to diversify funding sources.

Restaurant and institutional sales

Selling to chefs and institutional food services can help growers diversify their markets. The most likely market targets are independently owned and operated restaurants that frequently change menus. Many are upscale restaurants that depend on high-quality ingredients to serve a sophisticated and discerning clientele. Such restaurants tend to use a limited amount of product and have little storage space on site, which means they need multiple deliveries each week. Lower-priced or high-volume restaurants can also be potential clients, particularly for highly perishable items that suffer from long shipping

distances, such as tomatoes or strawberries. With today's food trends, many chefs feel market pressure to source locally produced, high-quality products.

Benefits of marketing to chefs include a higher wholesale price if the product is delivered to the restaurant; a larger sales volume than retail sales, resulting in lower marketing costs; a market for unique and highly perishable products; and exposure for the farm's product to a wider audience, particularly if the chef uses the farm name and product in a marketing strategy.

An intangible benefit of selling to chefs is the invaluable feedback that growers get from food professionals, who may recommend earlier harvesting or different postharvest handling or packaging. To sell to chefs, growers need to have good postharvest handling and sorting, grading and packaging capacity. Growers will also need to be able to provide a standard business invoice that can be entered into the restaurant's accounting system and, in most cases, cannot expect payment upon delivery. (The exception is if growers can receive credit card payments. Setting up such a system can have multiple advantages in working with large-volume customers.) Growers should also consider that chefs have a schedule almost opposite their own — chefs finish cleanup from dinner service after midnight — which means farmers need to be able to accept orders by email, fax or, as a last resort, an answering machine. Growers should also be able to provide advance product price lists and availability on a weekly basis.

A great way to break into restaurant sales is to offer chefs samples of products to find out if your products are high enough quality for them to use. Chefs expect products they order to be delivered as promised and need to know about crop shortages far enough in advance to order replacement products from other distributors. Never deliver to a chef during lunch or dinner service (11 a.m. to 2 p.m. and 5 to 10 p.m., respectively) or you are likely to lose the sale because of the inconvenience to the chef.

Another potential marketing outlet is institutional food services, such as campus dining, elementary and secondary school cafeterias, hospitals and nursing homes. Many of the benefits and rules about selling to chefs also apply here.

Note that most food services will require product liability insurance, standard packaging and grading, and readable invoices. Many food services use a purchase order system that can require a grower to be approved as a vendor before an order can be placed, unless the grower has a credit card system in place. Food services generally pay the standard wholesale price but are often interested in contracting for product throughout a season, which can balance out price fluctuations from week to week. In addition, to protect themselves from legal claims, many food services require that suppliers have a hazard analysis and critical control points (HACCP) safety audit system in place.

Direct store sales

Regional wholesale marketing of vegetables to chain or independent supermarkets is a viable marketing outlet for both large- and small-scale vegetable producers in Missouri. Many consumers request that their local supermarkets buy locally grown produce. To evaluate this market outlet, identify all food retailers in your area, and visit or call each store to determine if they are interested in purchasing locally grown produce.

Direct marketing to supermarkets eliminates the need for a broker and allows growers to label their produce. Large-scale producers can market large lots of produce by selling wholesale to a supermarket. Small-scale producers can fulfill the demand for niche produce items that supermarkets cannot purchase through traditional wholesale channels. Many upscale or specialty supermarkets may be looking for premium, farm-fresh produce items, such as organic, ethnic, heirloom or baby vegetables.

Harvest scheduling is crucial for marketing to supermarkets, since produce cannot be delivered to market every day. Supermarkets require a consistent supply and quality of produce. The labor or equipment to harvest produce on a timely basis must be available, and coolers may be needed to preserve postharvest quality and for short-term storage. Most supermarkets require product liability insurance, and some require growers to attend food safety training, to have a third-party auditor and to have specific requirements for harvesting, packaging and handling produce. For example, most supermarkets require the items to fit on a 40-by-48-inch pallet for ease of handling in the warehouse or store.

Some supermarkets will accept locally grown produce at the local store, and others may require the produce to be delivered to a central warehouse facility. Contact the local produce manager from the supermarket you are interested in selling to, and establish a relationship with the buyers. Buyers may wish to inspect the farm and discuss production practices used to grow the crop. Prices for produce are negotiated with each buyer, but price levels do not fluctuate significantly.

Food Safety Modernization Act (FSMA)

The FSMA was signed into law in 2011 and establishes minimum standards for food safety. It was prompted by the report of many food-borne illnesses prior to that date and represents the first major revision of food safety laws since 1938. The goal of the FSMA is to ensure a safe supply of food by shifting government emphasis from reacting to food safety incidences to preventing them. As food suppliers, vegetable growers with annual sales of more than \$25,000 are subject to the terms of the FSMA and must become familiar with it. Visit www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm for more information.

Good Agriculture Practices (GAP)

There are several types of GAP certification; all are aimed at ensuring that food producers adhere to practices consistent with the production of safe food. GAP programs usually are buyer-imposed and set standards for growers to follow. Various produce marketing outlets may require GAP certification of some sort. The FSMA is altogether separate from GAP certification and is not a substitute. Check with your marketing outlet to see if their vendors must be GAP certified. If so, your local extension specialist can provide additional information on obtaining GAP certification.

Pricing vegetables

Setting price is a critical component of successful marketing. Vegetable growers have a greater level of control than most other growers over marketable yields, input costs and price. The closer a grower is to the consumer, the more control over price the grower has. Buyers perceive price to represent value of the product. Underpricing, or pricing too low, gives the perception the product is inferior, and setting the price too high often drives customers away. Many growers make the mistake of setting the price too low at the beginning of the marketing season when competition is low and demand is high and then find it difficult to increase price later in the season. Before setting price, gauge the level of competition and the consumer demand for your product. For example, organic produce may have a stronger demand in urban areas, so prices can be set at a higher level. Also, early-season produce, such as tomatoes, has high demand with little competition in most markets, resulting in a higher price range.

There are several techniques for setting price. The most direct method is relative pricing. Relative pricing involves acquiring price information from competitors and setting your price relative to that level. Though a direct, easy way to set price, this may not be the most profitable method because individual growers have different production costs and quality. Local produce is fresh and often vine-ripe, and should therefore receive a higher price than imported produce at most supermarkets. So, the price of imported vegetables can often be used as the base price.

Cost-oriented pricing is the best method for setting price for vegetables. With cost-oriented pricing, the grower needs to know costs of production. When growers know both the fixed and variable costs of producing their vegetables, they can determine the break-even price. Fixed costs, commonly called overhead costs, are costs that do not change regardless of the level of production. Land rent, property taxes and depreciation are common fixed costs. Variable costs are input costs that vary with each production season and type of vegetable. Seed, fertilizer, boxes, fuel and labor are examples of variable costs. Variable and fixed costs added together are the total costs of production and can be averaged over the marketable yield to get an average total cost per pound, box or bushel. Break-even price is the price for a produce item at a certain level of yield where total costs are covered. This is the price floor for a grower's vegetables. Selling below this price level for a significant period of time will lower net income. However, once this price level is determined, most growers establish a price margin above this level to secure a profit.

Because most supermarkets, institutions and restaurants contract with growers, these market outlets maintain a relatively stable price through the marketing season. Wholesale produce auctions, farmers markets and roadside markets experience variable pricing based on local supply and demand.

Resources

- American Vegetable Grower. Toll-free: 800-572-7740.
<http://www.growingproduce.com>
- Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Businesses. 2003. Minnesota Institute for Sustainable Agriculture. <http://www.misa.umn.edu/Publications/BuildingASustainableBusiness>
- Community Supported Agriculture. Alternative Farming Systems Information Center, National Agricultural Library. <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>
- Community Supported Agriculture (CSA): An Annotated Bibliography and Resource Guide. 1993. DeMuth, S. USDA: National Agricultural Library. <http://www.nal.usda.gov/afsic/pubs/csa/csadef.shtml>
- Farmers' Markets: Rules, Regulations and Opportunities. 2002. Hamilton, Neil D. National Center for Agricultural Law Research and Information Center. http://nationalaglawcenter.org/wp-content/uploads/assets/articles/hamilton_farmersmarkets.pdf

The Farmer's Legal Guide to Producer Marketing Associations. 2005. O'Brien, D.; Hamilton, N.D.; and Luedeman, R. National Agricultural Law Center. http://new.nationalaglawcenter.org/wp-content/uploads/assets/articles/obrien_producermarketing_book.pdf

Growing for Market. A newsletter and website for produce growers. Toll-free: 800-307-8949. <http://www.growingformarket.com>

LocalHarvest. This website is heavily marketed to consumers and is a great place to list your farm for free. Consumers moving to new areas can find u-pick, farmers markets and CSAs through this site. <http://www.localharvest.org>

Food Circles Networking Project is an MU Extension program that connects farmers and consumers around local food. The project offers guides to sourcing local foods and information on creating community food systems. <http://foodcircles.missouri.edu>

The New Farmers' Market: Farm-Fresh Ideas for Producers, Managers and Communities. 2001. Corum, V., Rosenzweig, M. and Gibson, E. New World Publishing, Auburn, Calif.

North American Farmers' Direct Marketing Association. Toll-free: 888-884-9270. <http://www.nafdma.com>

Marketing Options for Commercial Vegetable Growers. University of Kentucky Cooperative Extension Service, publication ID-134. www.ca.uky.edu/agc/pubs/id/id134/id134.htm

Missouri Vegetable and Fruit Growers Database. <http://agebb.missouri.edu/hortgrow>

Missouri Produce Auction Report. <http://agebb.missouri.edu/hort/auction>

National Cooperative Business Association. Information on forming a cooperative business. <http://ncba.coop>

Sell What You Sow: The Grower's Guide to Successful Produce Marketing. 1994. Gibson, E. New World Publishing, Auburn, Calif.

The Legal Guide for Direct Farm Marketing. 1999. Hamilton, N.D. Drake University Agricultural Law Center, Des Moines, Iowa.

The Packer. A newspaper and website for commercial produce growers. Contains wholesale terminal market price information. Toll-free: 866-647-0918. <http://www.thepacker.com>

Vegetable Growers News. Phone: 616-887-9008. <http://www.vegetablegrowersnews.com>

Original authors: Mary Hendrickson, Division of Applied Social Sciences, and Lewis W. Jett, Division of Plant Sciences

ALSO FROM MU EXTENSION PUBLICATIONS

- G6222 *Selling Strategies for Local Food Producers*
- G6370 *Fresh Market Tomatoes*
- G6372 *Growing Sweet Peppers in Missouri*
- G6390 *Growing Sweet Corn in Missouri*
- NRAES51 *Produce Handling for Direct Marketing*

extension.missouri.edu | 800-292-0969



■ Issued in furtherance of the Cooperative Extension Work Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. Director, Cooperative Extension, University of Missouri, Columbia, MO 65211
■ an equal opportunity/ADA institution ■ 573-882-7216 ■ extension.missouri.edu