

GARDENING 9-1-1: COSTS AND BENEFITS OF HOME GARDENING

#PandemicHomesteading

Whether you are new to gardening and growing your own food, have many years of experience, or are considering getting started for the first time, you may have asked yourself if what you gain in home grown fruits, vegetables, and herbs actually offsets what you pay for plants, seeds, and other supplies. In fact, saving money on food bills was one of the top three reasons home gardeners gave for food gardening, according to a 2014 report from the National Gardening Association. The other top reasons provided by home gardeners included to grow better tasting food and to grow better quality food.

It is true – growing vegetables and fruits in home gardens is often described as a money saving activity for households. But, is it really?

Dollars and Cents of Food Gardening

Perhaps not surprisingly, gardeners find it hard to explain and evaluate the financial benefits gained through gardening. In addition to tracking the costs of establishing and maintaining a garden — for example investments in soil, plants, seeds, tools, fertilizers, and soil amendments — it can be challenging to collect and track data on quantities of food produced in the garden.

There are limited science-based studies that compare the actual costs of inputs for home gardens to the amount and value of food produced from those gardens. The studies that have been done are revealing.

So, what do we know? When it comes to costs, adjusted for current prices, spending on materials and supplies varied across gardens studied from \$167 to \$322. Some studies included expenses for items that could be used over several years, while others included only items that would be used in the year they were purchased. Examples of types of costs are: materials to build garden beds, equipment, seeds, plant starts, pesticides, soil test, land rental, fertilizer, mulch, compost, cost of hauling compost, and water. Based on what these gardeners spent, the average cost for a home garden in one season was about \$260. It is important to keep in mind that home gardens vary in size and scope and costs will also vary.

What about the dollar value of what's produced? Two methods can be used to measure the amount of vegetables



or fruit produced. The first is to weigh the garden produce. The second is to estimate values based on the average crop expected. Fruit and vegetable planting guides often contain this information.

For most of us, weighing the actual produce is probably the most accurate. After the produce has been weighed, the next step is to determine how much it would cost to purchase the same amount in a store or from another grower. The final step is to multiply the quantity produced by the cost. The number that results is the dollar value of your home-grown produce.

Here's an example. If your garden produced 10 pounds of roma tomatoes in a week and the price for roma tomatoes was \$0.98 a pound at the store that week, the value of your tomatoes that week is 10×0.98 or \$9.80. At the end of this publication you'll find worksheets that you can use to track what you spend on your garden as well as the value of what you harvest from your garden.

In the science-based studies, average gardens yielded from \$180 to \$1,300 worth of fruits and vegetables, over and above the costs for materials and supplies. However, these calculations did not include the cost of the gardener's time spent working in the garden or the time of family members who may also have worked in the garden. To estimate the value of an hour of the gardener's time, the studies either estimated the fair-market labor costs for those hours (how much it would cost to hire someone else to do the work) or used the federal- or state-mandated minimum wage. When the costs of gardeners' time

were included, the net value of home vegetable gardens declined to an average of -\$90 to \$550. The ranges are quite large. Local growing conditions, gardening practices, crop choices, and the skill of each gardener will all impact the actual yields of home gardens.

When it comes to the most profitable crops, tomatoes were reported as being ranked among the top five most profitable home garden crops. Leafy green vegetables, peas, strawberries, squash, and eggplant were other top profitable crops noted.

Beyond the Dollars and Cents of Home Gardening

While one of your goals might be to save money on food, even if you don't recoup all of your monetary and time costs through your food gardening efforts, the benefits of home gardening definitely extend beyond the financial benefit to households. Connecting to your food in a new way, having more fresh food to eat when it is in season, using season-extending techniques like cold frames and hoop houses to have your favorite crops earlier



or later than usual, and the joy of home grown produce that's been preserved and ready to eat during the winter months are all benefits of gardening for food that don't just involve money.

As a gardener, your intuition may be that gardening can reduce stress and positively impact mental health. In fact, the evidence assembled from the findings of peer-reviewed research on the benefits of plant-human interactions supports that. Researchers have also found that gardening can increase concentration and memory. Interaction with plants can result in better sleep and gardening can improve health by providing opportunities for physical activity. Researchers have found older adults who garden benefit from better balance as well as fewer functional limitations and chronic conditions.

Locally Grown by Others

At some point you'll likely hit a limit on what you can plant and grow yourself. And, since actual garden yields depend on many factors that gardeners can't control, your garden may not produce as much of a particular fruit or vegetable as you had hoped. If you find yourself wanting fresh, locally grown fruits, vegetables, and herbs, depending where you live, you likely have several options.

But just what does "locally grown" mean? Since there is no legal or nationally agreed upon definition, each of us can decide for ourselves what it means. Spend a few moments reflecting on what's important to you when it comes to "locally grown" and decide for yourself what your definition will be. Perhaps for you it means food grown within your county. For someone else it might mean food grown within a certain number of miles from home or within a particular geographic region that makes sense to them.

During the summer and into the fall, the most convenient place to buy local fruits, vegetables, and herbs might be regularly scheduled farmers markets in your community. To find a farmers market near you in Kansas, check out the From the Land of Kansas Farmers Market Directory, fromthelandofkansas.com/market/list

Other options include farm-stands, U-Pick farms, and buying direct from growers and farmers. Word-of-mouth and online forums and groups are often the most accurate source of information for current local opportunities. The Kansas Department of Agriculture, the Kansas Specialty Crop Growers Association, and your local K-State Research and Extension office are also good sources of information.

Don't assume your local grocery store or specialty store doesn't carry local or regionally grown produce. Look for signage, read labels, or simply ask employees.

If you don't use the produce you grow or buy and it goes to waste, in the end you are throwing money away. We all know the stories of home gardeners who have way too much zucchini and their often humorous efforts to give it away. If you have more of one type of vegetable than you and your family can eat, or want to preserve for later, you might consider donating the extra to a local food bank or food pantry. You could also talk to your friends and neighbors — perhaps they can use it and they may even have fruits and vegetables of their own to share.

No matter what your motivations are, gardening for food can be a rewarding activity. Benefits may include connecting to your food in a new way, improving health, and lowering food costs.

Learn More

For more resources on family finances, visit:
k-state.edu/family-finances/

For more resources on gardening, visit:
ksre.k-state.edu/lawn-garden/home/

For more resources on local foods, visit:
rrc.k-state.edu/localfoods/index.html



References

- BLS (n.d.) CPI Inflation Calculator, data.bls.gov/cgi-bin/cpicalc.pl
- Čepić, S., and Tomićević – Dubljević, J. (2018). Economic Inputs and Outputs of Urban Gardens: Literature Review. 26th International Conference Ecological Truth and Environmental Research, Bor, Serbia, June 12-15.
- Hall, C., and M. Dickson. (2011.) Economic, environmental, and health/well-being benefits associated with green industry products and services: A review. *J. Environ. Hort.* 29:96–103.
- Hall, C. R., and Knuth, M. J. (2019). An update of the literature supporting the well-being benefits of plants: Part 2 physiological health benefits. *J. Environ. Hort.* 37(2):63–73.
- Kelly, J., Sadeghieh, T., & Adeli, K. (2014). Peer review in scientific publications: Benefits, critiques, and a survival guide. *EJIFCC*, 25(3), 227–243.
- Langellotto, G. A. (2014). What are the economic costs and benefits of home vegetable gardens? joe.org/joe/2014april/rb5.php
- National Gardening Association. (2014). Garden to table: A 5 year look at food gardening in America. garden.org/special/pdf/2014-NGA-Garden-to-Table.pdf
- Upham, W. (2020). Planning your fruit garden (MF 352). bookstore.ksre.ksu.edu/pubs/MF352.pdf
- Upham, W. (2017). Vegetable garden planting guide (MF 315). bookstore.ksre.ksu.edu/pubs/mf315.pdf

A Word about Peer-Reviewed Research

Peer review is a process that evaluates the quality and potential contribution of research to science and the benefit to society. It is an important aspect of the scientific process and takes place when a scientist's research is subjected to an extensive review and examination by other scientists in the field. It encourages researchers to meet the standards of their discipline. It can also guard against unwarranted claims, unacceptable interpretations, or personal views being published without prior expert review. K-State Research and Extension is a statewide network of educators sharing unbiased, research-based information and expertise on issues important to Kansas.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Publications from Kansas State University are available at:
www.bookstore.ksre.ksu.edu

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Date shown is that of publication or last revision. Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, credit Elizabeth Kiss, *Gardening 911: Cost of Benefits of Home Gardening*, Kansas State University, July 2020.

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of K-State Research and Extension, Kansas State University, County Extension Councils, Extension Districts.

Worksheet 1: Garden Expense Tracker

Use this worksheet to keep track of what you spend on your home garden throughout the year. Costs vary from garden to garden and year to year. Examples of items to include are what you pay for materials to build garden beds, equipment, seeds, plant starts, pesticides, soil test, land rental, fertilizer, mulch, compost, cost of hauling compost, and water. At the end of the growing season, add up what you've spent and compare it to the value of the fruits, vegetables, and herbs you've harvested from your garden.

Date	Item Purchased	Cost
Total Spent		

Worksheet 2: Value of Fruits, Vegetables, and Herbs Produced

Use this worksheet to keep track of the dollar value of what is produced in your garden. At the end of the growing season, add up the value of the fruits, vegetables, and herbs you've harvested from your garden and compare the total to what you spent on materials and supplies.

Product	Weight in Pounds	Price at Store	Total Value
<i>Example: Tomato</i>	<i>10 lbs.</i>	<i>X</i>	<i>\$0.98 = \$9.80</i>
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		X	=
		Total	<u> </u>