

APPLY A LITTLE AGRICULTURAL ECONOMICS TO YOUR GARDEN FOR BEST RESULTS

Growing your own produce could be more economical than buying produce but consider the numbers

Abby Perry

We live in an age of do-it-yourselfers.

Some people are more interested in learning and putting skills to use than paying someone else for the same service. Gardening is one of those skills, but is it economical compared to purchasing produce?

Wyoming soils may need amending, seedlings will require the proper water, light, and favorable temperatures, and there are pesky deer with which so many Wyoming gardeners have to contend.

Soil Drama

Test the soil before establishing a garden to show what may be limiting, what may be surplus, and what might just be a headache for years. See the sidebar on the next page for more information about soil sampling.

Selecting a location with the best soil can save money, time, and effort. Building raised beds filled with a soil mix of your choice can help eliminate soil drama almost altogether. Up-front costs with building new raised beds and starting from "scratch" may seem high, but adding amendments to soil each year to solve existing soil problems could require annual monetary investments.



Consider water costs. If the water source is on a city line, there can be a large spike in seasonal city bills. If the water source is a well, the additional water usage may not be as cost prohibitive, but there will be electric costs to run the water pump, and water quality may be problematic.

Have the water tested (for more information about water quality, see bit.ly/wyowaterquality). If affordable, good-quality water is the limiting factor for a garden space, consider a plot at the local community garden.

Communal Garden?

Most community garden spaces offer fencing options to eliminate pests like deer or even rabbits, charge a one-time fee for the space including water usage, and offer various sizes of raised beds. Some communities even have high-tunnels or greenhouse plots that can be rented.

In addition to a one-time annual fee, garden groups often require some kind of community service, such as participation in cleanup days, at the start and finish of the season.

Involvement often produces a community of fellow growers whose knowledge and resources may prove invaluable.

Make Most of Gardening Efforts

Grow fruits and vegetables you like so you are more apt to take care of them, harvest, and preserve them to get the most from your garden.

Choose fruits and vegetables that store well, whether frozen, dried, or canned. Consider potatoes, onions, squash, tomatoes, beans, cucumbers, beets, or corn. Choose fruits and

vegetables that are expensive at grocery stores like tomatoes or melons (not all Wyoming climates can support warm-season crop growth without additional inputs like a hoop-house or greenhouse), or foods you regularly buy like beans, spinach, carrots, peas, or lettuce.

Start small. Controlling inputs and ensuring plants are getting adequate sunlight and water is easier with a smaller garden. A smaller growing space also allows for more time spent inspecting individual plants for disease and insect outbreaks and timely harvesting. Scouting for disease and insect outbreaks before they escalate saves valuable time, energy, and money.

The sooner mature food is harvested, the sooner the plant focuses on developing new fruit. Timely harvest usually means tastier products.

Figuring Out the Economics

Research and plan before jumping in. It's similar to planning a grocery list before going to a store. A plan can save money and having a record of inputs and outputs can help determine if a home garden saves money compared to purchased produce.

Inputs - Inputs are resources that go into a garden, such as soil amendments, seeds or seedlings, water, building materials for fencing or raised beds, fertilizer, or repellents.

The cost of inputs like soil amendments or building materials may be spread over several years because it isn't necessary to implement them every year.

The cost of water could be determined by comparing winter water



About that soil testing ...

Take representative samples of the entire area because the whole area will receive one kind of treatment at one rate. Collect samples in a W shape at a depth of at least 6 inches (this may be difficult in some Wyoming soil!). Place each sample from along the W path into a bucket and mix the soil, then collect one sample from the bucket to send to the lab of your choice. The local extension office can help guide the gardener in which laboratory might be the most appropriate for his or her needs.

bills to summer water bills. The difference is the increase of water needed for a lawn and garden. Estimate how much water was used on the garden versus the lawn.

Outputs - Harvested produce can be measured many ways: pounds of produce, number of jars canned, or packages frozen. Record what



Table 1. Differences in quality, production, and value between common home-grown and store-bought vegetables in Washington as an example (adapted from Antonelli et al. 2004).

Vegetable	Garden & Store Difference in Quality	Production per Square Foot	Relative Monetary Value
Asparagus	high ¹	medium	high
Bean, Green	medium ²	high	medium
Beet	medium	high	medium
Bok Choy	low ³	medium	medium
Broccoli	medium	high	high
Brussels Sprout	medium	low	high
Cabbage	low	low	low
Carrot	medium	high	medium
Cauliflower	low	medium	high
Celery	low	medium	medium
Chard, Swiss	high	high	medium
Collards	medium	medium	high
Corn, Sweet	high	low	low
Cucumber	medium	medium	high
Edamame	high	medium	high
Eggplant	medium	low	high
Kale	medium	high	high
Kohlrabi	low	medium	medium
Leek	medium	medium	high
Lettuce, Leaf	medium	medium	high
Lettuce, Head	low	low	medium
Muskmelon (Cantaloupe)	low	low	medium
Onion, Bulb	low	medium	low
Onion, Green	high	high	high
Parsnip	low	medium	medium
Pea	high	medium	high
Pepper	medium	low	high
Potato	low	medium	low
Pumpkin	low	low	low
Radish	low	high	medium
Rhubarb	medium	high	high
Spinach	medium	medium	medium
Squash, Summer	high	high	high
Squash, Winter	low	medium	low
Tomato	high	medium	high
Turnip	low	high	medium
Watermelon	low	low	low

is harvested to help determine if a specific crop should be planted again. Figure the money saved by multiplying the amount of produce (however recorded) by how much it is sold for at a market. Other outputs such as health benefits from the exercise or enjoyment you gain from gardening are harder to quantify in economic terms.

In the end, total costs (inputs) can be compared to total benefits (outputs). Table 1 from Washington State University Extension compares differences in quality, production, and value between home-grown and store-bought produce.

Once the garden is producing well, consider trading surplus fruits and vegetables with neighbors or other growers at a community garden plot. This is a “win-win” and will expand your fresh produce options. Although growing produce in Wyoming can be challenging, you can also reap a satisfying reward.

¹High indicates this home-grown vegetable is far superior to the store-bought version.

²Medium indicates this home-grown vegetable is somewhat superior to the store-bought version.

³Low indicates there is little difference between the home-grown and store-bought versions.

Those supply and demand charts applied in economics can also be used for the garden. **Abby Perry** is the University of Wyoming Extension rangeland educator based in Carbon County and serving southeast Wyoming. She received her master’s degree in agricultural and applied economics at UW. She can be reached at (307) 328-2642 or at ajacks12@uwyo.edu