



2021 Special Garden Project Hakurei Turnips

Turnip Trivia

- Turnips can be used as both human food and cattle feed.
- Turnips are a biennial, meaning it takes two years for them to produce seeds
- The heaviest turnip grown weighed over 39 pounds.
- The Irish originally carved turnips instead of pumpkins for jack-o-lanterns.
- During WWI, turnip flour was made in order to bake bread

A Touch of History

Many plants were found growing here when Columbus discovered North America. We call these native plants.



Turnips are an introduced plant to North America. They originate from eastern Asia and Europe.

Turnip's Family

Plants are grouped into families. Turnips, cabbage, broccoli and kale are all related. They are in the same plant family called *Brassicaceae*.

It's important to know which plants are related because they sometimes have the same disease and insect problems.

Turnip Planting Basics

Turnips are a cool season crop. They are planted directly in the ground early in the spring or later in the fall.

Cool soils help roots to develop. When temperatures get hot, turnips don't grow very well.

Turnips produce roots that can be eaten raw or cooked. The leaves or greens can also be cooked and eaten.

Where to plant?

Turnip plants will produce the best when placed in full sun. This is an area that will receive 6-8 hours or more of direct sunlight a day. It will tolerate partial sunlight conditions, but it won't produce as well.



Turnips will do best in fertile, well-drained soil. Make sure to leave enough room for the roots to grow. The more crowded the plants are, the smaller the roots will be.

To prepare the soil, spade 6 to 8 inches deep; then work in about a two inch layer of organic matter. Organic matter is good for all soil types. It helps sandy soils hold water better. In clay soils, it improves drainage so excess water drains away quicker and oxygen is then available to roots. Roots need oxygen to grow and function. Organic matter also adds nutrients to soil as it decomposes.

Compost and manure are examples of organic matter. Do not use fresh manure in spring. It can burn seedlings or cause some plants to grow lots of leaves or stems. Manure is best added in the fall.



How to Plant Turnips

Direct Seeding:

Two to three weeks before the average last frost, plant the seeds in a 2-4" wide band, spacing the seeds about 1" apart. Cover lightly with $\frac{1}{4}$ - $\frac{1}{2}$ " of soil. Keep the soil moist. When the seedlings are 4" high, they can be thinned to 2" in-between plants. The spacing between the seedlings allows the plants to receive enough sunlight for a mature root.

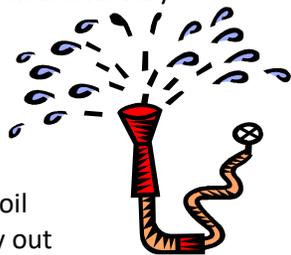
The average last spring frost dates in Nebraska are: eastern Nebraska, April 24; central Nebraska, May 1; and May 10 in western Nebraska. Check with your local Nebraska Extension Office for the frost-free date in your area.

For a fall crop, plant seeds as directed above 2-4 week prior to the average first frost for your area. The average first fall frost dates in Nebraska are: eastern Nebraska, October 20; central Nebraska, October 11, and September 21 in western Nebraska. Check with your local Nebraska Extension Office for the first frost date in your area.

Turnip Care

Watering:

Turnips don't tolerate dry, hot conditions very well. Watering is really important during root development. Plants will need about 1 inch of water a week. Try to keep the soil just moist. At each watering, moisten the soil about 6-8" deep. Let the soil dry out slightly between waterings. Do not overwater. This decreases the soil oxygen, which roots need to grow steadily.



If you use a sprinkler to water the garden, try to water in the morning. This will allow the leaves to dry off throughout the day and decrease the possibility of disease.

Mulching:

After the seeds begin to emerge, place a 2-3" layer of mulch around turnips to conserve moisture, keep soil temperatures cooler, and reduce weeds. This will help roots to grow quickly and steadily.

Mulch should not touch plant stems or leaves. Use dried *brown* grass clippings or shredded wood. Do not use green grass clippings as they can "heat up" and damage plants. Too deep of mulch can make soils water logged and lack oxygen, or attract insects and slugs.



Weeding:

Weeds steal water and nutrients from plants, causing them to grow slower. Control weeds when they're small by hoeing, hand-pulling or mulching. Do not hoe too close near turnips stems or too deep near the roots, because this may cause damage to the plants.



Fertilizing:

Turnips don't require much fertilizer. Additional fertilizer may not be needed if they were planted in soils that had added organic matter. If you do fertilize, use a well-rounded, water-based fertilizer once when the plants are established

Common Turnip Troubles

Flea beetles- Tiny, beetles with shiny black wings. They get their name from their ability to jump like a flea. They like to eat holes in the leaves of the turnip. They rarely will cause enough damage to damage the roots of the turnip. Insecticides labeled for use in garden crops can be used to help control if needed. Be on the lookout early, they are one of the first pests to emerge.

Aphids- are tiny insects that have piercing-sucking mouthparts. They come in a wide range of colors from green, to yellow, and even a reddish color.

Some aphids have wings and/or a set of little 'tail pipes' called cornicles out their back end. They suck out the plant juices and leave a mottled, blotchy appearance to the leaves. If the infestation is large enough, they can also cause the leaves to look puckered or ruffled.



Powdery Mildew- a

fungal disease on the upper side of the leaf that causes plants to have a powdery white appearance.

Having the proper spacing between plants will allow enough air flow to decrease powdery mildew, but some plants are more susceptible than others. Fungicides can also be used to protect plants.



Harvest & Using Turnips

Harvesting Turnips

If growing for the root, harvest can begin when the roots are radish sized after 30 days. Full sized turnips can be harvested after 40-50 days.

Carefully pull or dig around the roots to pop the roots out of the ground. Once dug, wash the roots to remove excess soil.

If harvesting for turnip greens, leaves can be picked when they are very young for best flavor or they can be harvested when the roots are pulled.

Storing Turnips

Turnips can be stored for 3-4 months in a cool, humid, dark place like a root cellar or vegetable drawer in the refrigerator. Keep turnips in a perforated plastic bag to help prevent them from drying out, but also make sure that they don't become moldy from too much moisture.



*Photo courtesy of Johnny's Select Seeds

Hakurei Turnips

Hakurei turnips are not your grandmother's turnips. Hakurei is a white salad turnip that is smooth, round and at its best when harvested under 2". The roots can be eaten raw or cooked, and the tops can also be cooked.

Exhibiting Tips

State Fair Special Garden Project Educational Exhibit Class G-775-001. Youth must be enrolled in the Hakurei Turnip 2021 Special Garden Project to exhibit. The educational exhibit is based on what was learned from the project. Present information on a poster 14" X 22" or in a clear plastic report cover. The 4-H member's name, age, full address, and county must be on the back of the poster or report cover.

State Fair Special Garden Project Fresh Cut Flowers or Harvested Flowers Class G-775-002. Youth must be enrolled in the Hakurei Turnip 2021 Special Garden Project to exhibit. The current years' Special Garden Project fresh cut flowers or harvested vegetable should be entered in this class.

Bring 5 roots following the guidelines in the publication 'Selecting and Preparing Vegetables, Herbs and Fruit' 4H226 (revised 2013) (<https://go.unl.edu/sgpresources>). The desirable traits the judge is looking for roots 1-2" in diameter that are at the same maturity and uniform in size. Trim tops to 1- 1 1/2" above the crown. Roots may be carefully washed, but do not scrub to avoid damaging the skin. Avoid selecting roots damaged by insects or disease, spongy, misshapen, or over-mature.

Fill out the Special Garden Project Evaluation at: <https://go.unl.edu/2021turnipeval>

Careers

Horticulture is the science and art of growing and using fruits, flowers, vegetables, ornamental plants and grasses to enhance our living environment. A horticulturist is a person who works with plants. They can have many different jobs from plant breeding, to growing the crops, to even processing and moving of plants.

A degree in horticulture can offer the following career opportunities:

- Educator
- Field or Lab Researcher
- Floral Designer
- Greenhouse Manager
- Horticulture Entrepreneur
- Landscape Designer
- Landscape Contractor
- Nursery Manager
- Plant Breeder
- Plant Propagator
- Grower
- Vineyard Manager

Horticulture Entrepreneur

Do you enjoy growing plants and vegetables? Have you ever thought how doing what you enjoy could put a little extra money into your pocket? An entrepreneur is someone who organizes a business venture and assumes the risk for it. A horticulture entrepreneur is someone who puts the art of growing plants together with a business. Some horticulture entrepreneurs sell vegetables, fruits, or flowers at farmers markets, road side stands, or to neighbors.

Interested in finding out more about entrepreneurship? There is a 4-H curriculum project called Entrepreneurship Investigation (ESI) that can do just that. ESI uses a variety of tools to help develop entrepreneurial skills and find a business niche. Through exciting activities, case studies and current technology, participants are transformed into budding entrepreneurs!

Youth will have the skills and tools to start their own business, as well as have a completed business and marketing plan – the “road map” to the entrepreneur’s success.

To find out more about ESI contact your local Extension office or visit <http://esi.unl.edu/>.

Want to find out more about careers like this in horticulture? Visit UNL Agronomy and Horticulture Department at <http://agronomy.unl.edu/>

**Don't forget to fill out the
Special Garden Project Evaluation at:
<https://go.unl.edu/2021turnipeval>**



Filling out the evaluation will register you for a gardening prize as well as a certificate good toward the 2022 Nebraska Extension Special Garden Project.

Information compiled by Elizabeth Exstrom, Extension Educator

Turnip information:

<https://foodprint.org/real-food/turnips/>

<http://justfunfacts.com/interesting-facts-about-turnips/>

<https://www.almanac.com/plant/turnips>

Mulch Photo: <https://www.forestryimages.org/browse/subthumb.cfm?sub=21385>

Career information: <http://dictionary.kids.net.au/word/entrepreneur>

Hakurei turnip photo courtesy of Johnny's Select Seeds, Johnnyseeds.com, 1-877-564-6697.

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