



2023 Special Garden Project Mrs. Burns' Lemon Basil

Basil Facts:

- Basil comes in a wide variety of colors including bright green, dark green and purple.
- Basil comes in several 'flavors' including lemon, Thai, cinnamon, lime, and licorice.
- Basil gets its scent from volatile aromatic compounds that vary with cultivars.

A Touch of History

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



Basil is an introduced plant. It is native to India.

Basil's Family

Plants are grouped into families. Basil and mint are related. They are in the same plant family called *Lamiaceae*.

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

Basil Planting Basics

Basil is a warm season crop. Seeds or transplants can be planted directly in the ground after the last frost date and when soils are warm, usually in mid to late May.

Warm soils allow the seeds and plants to grow rapidly. Cold, wet soils will cause seeds to rot.

Herbs planted for its leaves, like basil, are best if not allowed to flower. If you allow basil to flower, it will affect the flavor of the leaves and your dish. In a bouquet, the flavor doesn't matter as much.

Where to plant?

Basil 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. Also make sure they have plenty of wind protection.

Basil will do best in fertile, well-drained soil. Make sure to leave enough room for the plants to grow. The more crowded the plants are, the taller they get as they reach for sunlight.

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 Basil

Direct Seeding:

After the average last frost, plant the seeds in rows, placing about 2-3 seeds per inch. Cover lightly with $\frac{1}{4}$ " or less of soil. Keep the soil moist. Thinning is not necessary, but final spacing should be 4-8" between plants and 18" between rows. The spacing between the seedlings allows the plants to receive enough sunlight for the plant and will result in thicker stems.

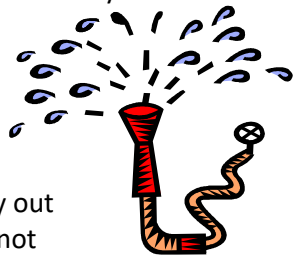
The average last spring frost dates in Nebraska are: eastern Nebraska, April 24; central Nebraska, May 1; and May 10 in western Nebraska. Check with your local Nebraska Extension Office for the frost-free date in your area.

If you don't have room to plant in a traditional garden setting, basil can be grown in containers. Plant seeds in a 10 inch container or one of similar size. Garden soil is not recommended for containers. A good potting mix will work well for growing plants in containers.

Basil Care

Watering:

Basil can tolerate dry, hot conditions very well. Do not overwater. 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.

Fertilizing:

Basil doesn'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.

Mulching:

After the seeds begin to emerge, place a 2-3" layer of mulch around basil 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 basil stems or too deep near the roots, because this may cause damage to the plants.



Pinching:

To encourage fuller plants, pinch back the terminal or top bud in young plants. This can be done when the plants are small with several sets of true leaves, or you can wait until they reach 18" tall. Pinching the plant helps to improve the branching habit and results in longer side stems. This also helps to keep them from growing excessively tall and prevents lodging or flopping. Also pinch off flowers if you are planning on eating the basil.



Common Basil Troubles

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.



Japanese Beetles- are copper colored beetles that devour certain plants, including basil. The leaves will have a lacey appearance to them when eaten by Japanese Beetles. Squish the adult beetles when they are seen or consider using an insecticide labeled for use in the garden to prevent damage from happening. Pay close attention to when pesticides are applied to decrease the risk to pollinators like bees.



Harvest & Using Basil

Harvesting Basil

Begin light harvesting after plants have become established. It is best done in the early morning when the temperature is cooler and the leaves are less likely to wilt. A full harvest should be completed just before the plants start to flower. Cut the entire plant 4-6" above the ground to promote a second growth. Leaves are easily bruised when picking, so handle carefully. Do not store at a temperature less than 50°F

Storing Basil

Basil doesn't respond well to cold temperatures. Harvest and wash basil. Harvested basil can be kept in a glass of water or a vase for several days. It can also be dried and stored for later use.



*Photo courtesy of Johnny's Select Seeds

Mrs. Burns' Basil

This herb can be used multiple ways. Lemon basil has a unique lemon flavor that can be added to any recipe or to cut flower arrangements to add scent and interest.

Exhibiting Tips

State Fair Special Garden Project Educational Exhibit Class G-775-001. Youth must be enrolled in the Mrs. Burns' Basil 2023 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 Vegetables or Harvested Vegetables Class G-775-002. Youth must be enrolled in the Mrs. Burns' Basil 2023 Special Garden Project to exhibit. The current years' Special Garden Project fresh cut vegetables or harvested vegetable should be entered in this class.

Bring 5 stems following the guidelines in the publication 'Selecting and Preparing Vegetables, Herbs and Fruit' 4H226 (revised 2022) (<https://go.unl.edu/sgpresources>). The desirable traits the judge is looking for are 5 stems that are at the same maturity and uniform in size that are free from insect damage. Avoid flowering stems as this decreases the eating quality of the herb.

Fill out the Special Garden Project Evaluation at: <https://go.unl.edu/2023basileval>

Careers

Horticulture is the science and art of growing and using fruits, vegetables, flowers, 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

Plant Nutritionist

A plant nutritionist studies the chemical elements and compounds necessary for plant growth, plant metabolism and their external supply. Often, they develop formulations to provide individual plants with the ideal nutrients for optimal plant health and growth.

Training/Education Needed

The minimum education requirement is a Bachelor's degree. Additional degrees are required for advanced positions and research initiatives.

Where to Study

For 2- and 4-year college and university programs across the country.

Salary Expectations

In August 2020, the median yearly salary for a plant nutritionist was \$53,506, according to Salary.com.

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

Using Basil

Edible Flowers

Use the flowers in any recipe that calls for basil, or to garnish drinks, salads, soups, pasta, and desserts. Flavor is of intense basil and citrus.

Dried Basil

The clean foliage may be air-dried or dried in a food dehydrator at less than 125 °F until dry. Small bundles of cut stems with foliage may be hung upside down in a warm, well-ventilated room to dry. Crumble the completely-dried leaves and store in small, air-tight containers for up to 12 months.

Basil Pesto

Yield: 8 servings

Ingredients:

- 4 cups fresh, washed basil
- 1/3 cup nuts (walnuts, pine nuts, almonds)
- 3 teaspoons garlic, minced
- 1/2 cup Parmesan cheese
- 1/2 cup olive oil
- Salt and pepper to taste

Directions:

- Wash hands with soap and water.
- Pat basil dry with a paper towel after washing. Place the basil and nuts in a food processor or blender. Pulse until combined. Scrape down sides with a spatula or spoon.
- Add garlic and cheese to basil mixture and pulse until combined. Scrape down sides again with a spatula or spoon.
- While the food processor is running, slowly add half of the olive oil. Stop the food processor and scrape down sides again. Start the food processor and add remaining oil.
- Add salt and pepper, if desired.
- Store leftovers in a sealed container in the refrigerator or freeze for up to three months.

Notes: If desired, leave out the Parmesan cheese. You may need to decrease the olive oil.

Source: Nebraska Extension

**Don't forget to fill out the
Special Garden Project Evaluation at:**
<https://go.unl.edu/2023basileval>

Information compiled by Elizabeth Exstrom, Extension Educator

Basil information:

<https://ciaoflorentina.com/cool-facts-about-basil/>

<https://hgic.clemson.edu/factsheet/basil/>

<https://food.unl.edu/recipe/basil-pesto>

Career information: <https://www.seedyourfuture.org/careers>

Mrs. Burns' Lemon Basil photo courtesy of Johnny's Select Seeds, Johnnyseeds.com, 1-877-564-6697.

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