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Kentucky State University Cooperative Extension Connections



Spinach (*Spinacia Oleracea*)

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Introduction and Background

- Spinach (*Spinacia oleracea* L.) is an annual leafy green vegetable belonging to the Amaranthaceae family and is believed to have originated from ancient Persia (University of Missouri, 2020).
- There are three main spinach types: flat leaf, savoy, and semi-savoy spinach (Colorado State University Extension, 2025).
- Spinach became popular in North America during the 20th century and was associated with strength through the Popeye cartoon character (University of Missouri, 2020). Spinach is rich in vitamins, minerals, and antioxidants and can be eaten raw or cooked in many dishes (Cleveland Clinic & AHA, 2024).
- In 2024, spinach production in the United States totaled approximately 617 million pounds with a crop value of about \$545 million (USDA-NASS, 2025)

Growing Spinach in Kentucky

- Spinach grows best in cool temperatures between 50–60°F (UK, 2021).
- Plant spinach during spring or fall in fertile, well-drained soil with a pH of 6.5–7.0 (UK, 2021).
- Spinach can be grown in pots, raised beds, or open fields with full sunlight to partial shade.
- Mixing aged compost or organic matter into the soil improves growth (UK, 2021)



Images credits: Agribotix, <https://agribotix.com/how-to-harvest-spinach/>

Care and Maintenance

- Keep soil evenly moist but not soggy by watering frequently (UK, 2021).
- Use water-soluble fertilizers such as fish fertilizer for healthy growth (UK, 2021). Baby spinach can be harvested in 4–6 weeks, while mature leaves are ready in 6–8 weeks (UK, 2021; SSE, 2025).
- Spinach can be stored in the refrigerator for up to 10 days under ideal conditions (SSE, 2025).

Harvest and Storage

- Harvest can begin as early as 4 to 6 weeks for baby spinach (young leaves), and 6 to 8 weeks for mature leaves (UK, 2021 & SSE, 2025).
- Harvest spinach by obtaining the outermost leaves once they are large enough to eat (SSE, 2025).
- Spinach can be stored in colder areas of the fridge for up to 10 days for ideal condition (SSE, 2025).
- Avoid storing spinach near ethylene-producing fruits like apples, as this accelerates spoilage.

Nutritional Benefits

- Spinach is rich in vitamins A, C, K1, and B9 (folate), as well as minerals such as iron and calcium (Cleveland Clinic & AHA, 2024).
- It contains antioxidants such as lutein and zeaxanthin (Cleveland Clinic, 2024).
- Spinach is low in calories and high in fiber (AHA, 2024).

Health Benefits

- **Improved eye health:** Vitamin A and beta-carotene lower risks of eye disorders (Cleveland Clinic, 2024).
- **Cancer prevention:** Antioxidants minimize the damaging effects of free radicals, thus may reduce the effects of cancer disease (NFCR, 2024).
- **Lowered blood pressure levels:** Spinach is high in magnesium, folate and a B Vitamin that create nitric oxide which is known to help lower blood pressure (Cleveland Clinic, 2024).
- **Skin health and immune function:** Vitamin C builds strong skin, repairs tissue and supports a responsive and protected immune system (Oregon State University, 2025).
- **Supports healthy blood:** Eating an iron-rich diet that includes spinach can help prevent iron-deficiency known as anemia (AHA, 2024).



Image credit: NFCR <https://www.nfcr.org/blog/spinach-a-superpower-against-colon-cancer/>

Add Spinach to Your Healthy Diet

- **Sauté:** fresh spinach with garlic, onions, and olive oil.
- **Bake:** spinach, artichoke hearts, mayonnaise, parmesan cheese, and monterey jack cheese together for a classic spinach artichoke dip.
- **Blend:** spinach with fruits; strawberries, pineapple, banana, and chia seeds to make a delicious smoothie.
- **Fold:** spinach, red bell peppers, and hummus together on a whole-wheat flatbread for a healthy, filling snack.
- **Toss:** spinach, feta, toasted almonds, red onions, and apples to make a classic spinach salad. Dress with a mustard vinaigrette.



Image1 credit: Panlasang Pinoy, <https://panlasangpinoy.com/garlic-sesame-spinach-recipe/> Image2 credit: Veggie World Recipes, <https://veggieworldrecipes.com/cauliflower-spinach-green-smoothie/>

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