



Growing Spinach, A Cool-Season Vegetable

Spinach can be grown at the beginning or end of the gardening season. Find out more about planting and caring for spinach.

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Spinach (*Spinacia oleracea*) is a vitamin-rich, delicious, leafy green that is best grown in the cool weather of either spring or fall. The many varieties of spinach include smooth-leaf, savoy or curly leaf, arrowhead, and savory. It can be eaten raw or cooked. Spinach stores well in the refrigerator or can be blanched and frozen for later use.

Spinach is versatile in the kitchen and packs a powerhouse of nutrients: iron; potassium; magnesium; vitamins A, B6, B9, C and E; and lutein.

Select a variety of spinach for growing and a garden area for planting. For best results, use fresh seeds as the germination rate for this crop deteriorates quickly. Always check the seed packet for specific varietal recommendations. A raised bed with good drainage is perfect for growing an early spring crop since the soil warms quickly and can be worked following just a few warm days. Spinach likes full sun but will tolerate partial shade. Prepare the planting bed by amending the soil with rich compost or aged manure. Mini-till or spade the ground and level it off with a rake. Mature spinach has a long taproot, so loosen the soil to between

12 and 18 inches. Sow the seeds $\frac{1}{2}$ inch deep two inches apart, in rows 12 to 18 inches apart. If you are following intensive gardening plans, such as Mel Bartholomew's square foot gardening, plant 9 seeds per square foot. Make sure the soil is moist. You can grow spinach in a container, but choose varieties specifically suited to it, a container large enough for it, and a nutrient-rich soilless potting mix.

One key to successfully growing spinach is to plant the seeds when soil temperatures are cool. Spinach seeds germinate best in a soil temperature of 45⁰ F to 68⁰F. Recommendations are to plant spinach about four to eight weeks before your average last frost date in the spring and six to eight weeks before the average first frost date in the fall. Two crops per year can be achieved! Many home gardeners have become discouraged growing spinach because they start too late in the spring. Understanding the relationship of spinach to temperature is critical to achieving success.

When planting in early spring, shelter the seeds with a clear polypropylene cover over the raised bed for the first few weeks. A framework over the bed keeps the plastic from direct contact with the spinach and prevents stem damage if snow, rain or ice builds up on the plastic cover. The plastic cover serves as a greenhouse, encouraging leaf growth on those early spring days.

Within 7 to 10 days, the first signs of sprouting usually appear as the cotyledon (seed leaves) emerge. During light rainy days, remove the plastic cover for a good soaking. Keep the cover on until the weather warms. Optimum growing temperature is 50⁰ F to 60⁰ F, but young seedlings can tolerate temperatures as low as 15⁰ F to 20⁰ F. Try to keep the soil consistently moist because spinach will bolt if the soil dries out. When spinach bolts, it sends up a strong central stem to produce seed, and it becomes bitter and inedible. When you must supplement with irrigation, water the soil, not the plant leaves. Moisture on the leaves can encourage fungal diseases.

Thin out the plants as they reach two inches in height. Spinach plants need four to six inches of space to develop properly. Again, check the seed packet for specific varietal recommendations. Failure to thin out seedlings can result in stunted growth and premature bolting. Better spacing also decreases the plant's susceptibility to disease and pests. Roots are shallow at this stage, so be careful when thinning. Gently pull out all weeds when they are small so as not to disturb

the spinach roots. Aphids and leaf miners are typical pests and removing weeds can help control the population.

Mulching the young plants will help keep the soil moist and cool and will also discourage weeds.

As daylight increases and temperatures warm to 70°F, cover with a shade cloth. This floating row cover will help cool the soil as well as control insects.

Begin harvesting the spinach leaves when they reach a nice size. Leaves can become bitter and lose quality if left on the stem too long. Simply snip off the outer leaves at their base, leaving the main stem or rosette intact for further growth.

Once the days warm up and the temperature reaches the 80°F, spinach will want to bolt. Therefore, with a spring planting, this plant's productive life usually stops by the end of May. Spinach is also day-length sensitive. It will bolt in June even if the temperatures are cool. Pull out the plants and add them to your compost pile. Amend the soil with compost and reuse the bed for the next warm-season vegetable crop, such as beans or peppers.

For a fall crop, use the same season-extending methods as described above - only in reverse. Shade cloth can keep the soil cool during the early warmer days of fall. Plastic covers can keep the growing area warm enough to be able to harvest a crop into late fall or, with luck, early winter.

By understanding the growing requirements of spinach, you can be successful with two abundant crops each year. Enjoy your fresh picked, crisp leaf spinach in salads and cooked dishes. Visit [Cut Cancer Risks with Spinach](#) for recipes using spinach.