



Asparagus

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Environmental Preferences

Light: Sunny.

Soil: Well-drained, deep sandy loam.

Fertility: Medium-rich.

pH: 6.0 to 6.7

Temperature: Cool (60 to 65°F)

Moisture: Average; a flush of spears often follows a soaking rain.

Culture

Planting: 1-year crowns, early spring.

Spacing: 18 inches by 4 to 5 feet; or in wide beds of three rows with plants 18 inches apart in all directions.

Hardiness: Hardy perennial should be mulched in autumn.

Fertilizer needs: Medium-heavy feeder, high phosphorus and potassium, and organic matter at planting per soil test results. A complete fertilizer is

required in the years following transplanting in late winter or very early spring. A soil test is always the best method of determining the fertilization needs of the crop. May sidedress after harvest; benefits from yearly topdressing of compost in late winter/early spring.

Cultural Practices

Asparagus is a perennial vegetable that will live from 12 to 15 years or longer. It is one of the most valuable of the early vegetables and is well adapted to freezer storage. During the harvest period (traditionally spring, but see below for summer harvest instructions), the spears develop daily from underground crowns. Asparagus does well where winters are cool, and the soil occasionally freezes at least a few inches deep; it is considered very hardy.

Start asparagus either from seed or from 1- to 2-year-old crowns. For the fastest results, crowns purchased from a reputable nursery are recommended. There is a risk of disease from asparagus from less reputable dealers. Starting plants from seed requires an extra year before harvest. Seed may be started in peat pots; they are slow to germinate, so be patient. Seedlings may be transplanted in June. Crowns are usually shipped and set out in March or April.

Seeds may be started in peat pots; they are slow to germinate (up to three weeks indoors), so be patient. Seedlings may be transplanted in June, either to the final growing site or to a temporary transplant bed. Direct transplanting to the permanent site allows simple planting techniques and avoids disturbing plant growth with a second move. However, the seedling plants will require more attention to weed control on the larger, permanent site than in a smaller transplant bed where the plants are closer together. If using a transplant bed, dig the one-year-old crowns the next spring before growth starts. Use a spading fork, digging 6 inches under the plants, to gently loosen the soil and lift the crowns. Carefully separate the intertwining roots of neighboring plants, then set the crowns in the permanent site.

Choose a site with good drainage and full sun. The tall asparagus ferns may shade other plants, so plan accordingly. Prepare the bed as early as possible and add pre-plant applications of phosphorus and potassium per soil test results. It is best to get the phosphorus added during bed prep since phosphorus moves very slowly down through the soil. This places it where the roots will be able to access more easily. Add leaf mold or compost at the rate of 20% per volume. In heavy soils, double digging is recommended. To double-dig, remove the top foot of soil from the planting area. Then, with a spading fork or spade, break up the subsoil by pushing the tool into the next 10 to 12 inches of soil and rocking it back and forth. Do this every 6 inches or so. Double digging is ideal for the trench method of planting asparagus since a 12-inch-deep trench is usually dug anyway. The extra work of breaking up the subsoil will be well worth the effort, especially in heavy soil. The trench is dug 12 to 18 inches wide, with 4 to 5 feet between trenches. The same method may be used in wide-bed plantings, with plants staggered in three rows. Mix the removed topsoil with organic matter and spread about 2 inches of the mixture at the bottom of the trench or bed. Set the plants 15 to 18 inches apart, mounding the soil slightly under each plant so that the crown is slightly above the roots. Crowns should be of a grayish-brown color, plump, and healthy-looking. Remove any rotted roots before planting. Spread the roots out over the mound of soil and cover the crown with 2 to 3 inches of soil. Firm well. As the plants grow, continue to pull soil over the crowns (about 2 inches every two weeks) until the trench is filled. Water if rainfall is inadequate.

According to research, total yield is unaffected by asparagus planting depth; however, deeper plantings produced larger spears, but fewer of them. Shallow plantings send up shoots earlier in spring, and thus are subjected to possible frost damage.

Asparagus shoots or spears should not be harvested the first season after crowns are set. Research plots harvested one year after planting crowns had a cumulative yield 23% lower after five years than did plots harvested for the first time two years after planting. Harvest lightly for three to four weeks in the second year. The fleshy root system needs to develop and store food reserves to produce growth during subsequent seasons. Plants harvested too heavily too soon often become weak and spindly, and the crowns may never recover. An extra year is added to the above schedule for asparagus started from seed; i.e., do not harvest at all the first TWO seasons, and harvest lightly the third. When

asparagus plants are in their fourth season, they can be harvested for 8 to 10 weeks each year.

Weed the bed each spring before the first shoots come up, to avoid accidentally breaking off spears. During the production period, it is best to pull rather than hoe weeds if possible.

Harvest spears daily during the 8- to 10-week harvest period. The 6- to 8-inch spears are best and should be snapped off just below the soil surface. If the asparagus is allowed to grow much taller, the bases of the spears will become tough and need to be cut; cutting too deeply can injure the crown buds which produce the next spears. Blanched asparagus is a gourmet item; to blanch (whiten) the spears, mound soil around them or otherwise exclude light from them so that chlorophyll is not formed in the stalks.

When harvest is over (after 8 to 10 weeks), allow the spears to grow. Asparagus has attractive, fern-like foliage that makes a nice garden border. Some gardeners prefer to support the growing foliage with stakes and strings to keep them tidy. In high-wind areas, it is a good idea to plant the rows parallel to the prevailing winds so that the plants support each other to some extent.

There are several ways to extend the harvest period of your asparagus planting. One method is to plant at different depths (3 inches, 4 to 6 inches, 6 to 8 inches, and 8 to 10 inches). The shallow plantings will come up first and can be harvested while the deeper plantings are just forming. This method will result in a slightly longer harvest but may result in some plants being less vigorous than others.

Another way to extend the harvest for a few weeks is to remove mulch from half of the asparagus bed. Leave the mulch on the other half. The exposed soil will warm up more quickly, and the crowns will sprout earlier. This process may be sped up even further using black plastic, but be careful not to encourage growth too early, as heavy frost can make spears inedible. Remove mulch from the second bed when spears begin to appear.

A third technique for extending the asparagus harvest has been the subject of university research and is recommended for home gardeners with plenty of space. Plant twice as much asparagus as needed for your household. Harvest half of the plants as you normally would in spring and early summer, then allow the foliage to grow for the rest of the season. During the early harvest period, allow the ferns to grow in the other half of the asparagus planting. Then, cut the ferns in the second half in late July. This causes the crowns to

send up new spears, which can be harvested till late in the season. If rainfall is short in summer, it will help to water this bed for good spear production. Light mulch will help keep the soil surface from becoming too hard for the shoots to break through easily. If using this method, harvest the spring bed only in spring and the fall bed only in fall! Otherwise, you risk weakening the crowns.

In all asparagus plantings, cut the foliage down to 2-inch stubs after frost when the foliage yellows, before the red berries fall off to reduce overcrowding caused by the sprouting of self-seeding. A layer of 4 to 6 inches of mulch of compost, manure, leaves, or other material added at this time will help control weeds and add organic matter and nutrients.

Common Problems

Diseases: Rust (use resistant varieties); Fusarium root rot.

Insects: Asparagus beetles, grasshoppers, and cutworms.

Cultural: Weak, spindly plants and/or too few spears from too early or too heavy a harvest; crown rot or poor production from inadequately prepared, heavy soil; moles/voles can be a problem.

Refer to the current year's version of Virginia Cooperative Extension's Pest Management Guide - [Home Grounds and Animals](https://www.pubs.ext.vt.edu/456/456-018/456-018.html), Home Vegetable Chapter for current control recommendations (<https://www.pubs.ext.vt.edu/456/456-018/456-018.html>).

Harvesting And Storage

Days to maturity: 2 to 3 years.

Harvest: Third- year spears; snap off just under the soil surface when 6 to 8 inches tall, before tips begin to separate; use or refrigerate immediately. Stop harvesting when spears are the diameter of a pencil.

Approximate yields: 3 to 4 pounds per year, per 10-foot row.

Amount to raise: 6 pounds per person.

Storage: Process or refrigerate immediately in a plastic bag.

Preservation: Can or freeze.

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