

## Asparagus

This hardy perennial is one of the most valuable of the early vegetables and will provide delicious spears every spring once the plants are established. Although asparagus (*Asparagus officinalis*) takes two to three years to begin production, it will be highly productive for seven to eight years before gradually declining.

### BED PREPARATION

Choose a site for your permanent asparagus bed with good drainage and full sun. The tall ferns of asparagus may shade other plants, so plan accordingly. Prepare the bed as early as possible, and enrich it with additions of manure, compost, bone or blood meal, leaf mold, or a combination of several of these.

Follow the results of a soil test to maintain a soil pH between 5.8 and 6.5 and optimal fertility levels. If lime is recommended from soil test results, it should be applied during bed preparation, at least six months before planting.

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 methods of planting asparagus, since a 6- to 8-inch-deep trench is usually dug anyway. The extra work of breaking up the subsoil will be well worth the effort. The trench is dug 12 to 18 inches wide, with 4 to 5 feet between trenches. The same methods may be used in wide-bed plantings, with plants staggered in three rows. Mix the topsoil that has been removed with organic matter and spread about 2 inches of the mixture in the bottom of the trench or bed.

### PLANTING

Start asparagus either from transplants or 1-year-old disease-free crowns purchased from a well-established, reputable nursery. The correct planting date for crowns is timed when crowns can be moved dormant and remain dormant until planting. If you delay planting crowns until very warm weather, they will begin sprouting before planting which can injure the developing buds.

PLANTING DATES FOR CROWNS	
Area	
Piedmont	Early February – Late March
Central	Late January – Early March
Coastal	Early January – Late February

Set the plants 15 to 18 inches apart and 6 to 8 inches deep, mounding the soil slightly under each plant so the crown is slightly above the roots. Crowns should be dirty wheat-brown in color, plump, healthy-looking and have 15 to 20 storage roots. Remove any rotted roots before planting. Spread the roots out over the mound of soil and cover the crown with 2 inches of soil. As the plants grow, continue to pull soil over the crowns (about 2 inches every two to three weeks) until the trench is filled and the crowns are 6 to 8 inches deep. Water if rainfall is inadequate.

### RECOMMENDED CULTIVARS

- Jersey Knight
- Jersey Gem
- Jersey Giant
- Purple Passion

## FERTILIZING

Nitrogen, phosphorus and potassium are all important at planting and throughout the entire life-span of asparagus.

Pre-plant applications of phosphorus and potassium depend on soil test results. It is best to get the phosphorus down into the planting furrow at transplanting because the crowns will ultimately be 6 to 8 inches deep and phosphorus does not move much in the soil.

A complete fertilizer is required in the years following transplanting. A soil test is always the best method of determining the fertilization needs of the crop. Information on soil testing is available in HGIC 1652, *Soil Testing*. Generally, the total yearly amount of nitrogen required is 1 ½ pounds of actual nitrogen per 1,000 square feet or ½ pound of actual nitrogen per 100 feet of row. Apply half in late winter or very early spring before the spears emerge and side-dress with the remaining half after harvest. Asparagus benefits from yearly top-dressing of compost.

## WATERING

Adequate soil moisture is important to keep young plants growing rapidly. Good growth in the first year is important for large crowns. During the period of stand establishment they should not be water-stressed or over-watered. Water sufficiently to moisten the soil to a depth of at least 6 inches. Light watering will encourage shallow rooting.

## CULTURAL PRACTICES

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. Maintain a 2- to 3-inch layer of mulch throughout the year.

Blanched asparagus is a gourmet item. To blanch or whiten the spears, mound soil around them or otherwise exclude light from them so that chlorophyll is not formed in the stalks.

## HARVEST AND STORAGE

Asparagus crowns may need two full growing seasons before limited harvesting can be done in the third year. The fleshy root system needs to develop and store food reserves to produce growth during subsequent seasons.

Harvest lightly in the third year for three to four weeks if the ferns the year before were very vigorous, bushy and shoulder-high. It is possible to harvest very lightly in the second year just for a taste if the fern in the previous year was very vigorous, bushy and waist-high. If the fern was weak, postpone harvest until the third year.

Harvest spears daily during the harvest period. Six- to 8-inch spears are best and should be cut or snapped off at the soil surface before the tips begin to separate. Cutting too deeply can injure the crown buds that produce the next spears. If the asparagus is allowed to get much taller, the base of the spear may be tough and will have to be cut.

When harvest is over—that is, when the diameter of the spears has been reduced to pencil-size—allow the spear to grow to full height. Asparagus has an 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 for asparagus. One method is to plant at different depths, for example, 4 to 6 inches, 6 to 8 inches and 8 to 10 inches. This method will result in a slightly longer harvest, but may result in some plants being less productive than others. The shallow planting will come up first and can be harvested while the deeper plantings are just forming. Ideal-sized spears will be produced at the 6- to 8-inch depth; the 8- to 10-inch depth or deeper will produce fewer spears, but spears with larger diameters. The 4- to 6-inch depth will produce more spears, with smaller diameters than deeper planting produces.

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 quicker and induce the crowns to sprout earlier. This process may be speeded up even further by 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 asparagus harvest has been the subject of Clemson University research and is highly recommended for home gardeners who have plenty of space. Plant twice the asparagus needed for your household. Harvest half of the plants as you normally would in the spring; do not harvest the other half in spring. Allow the foliage from the spring-harvested plants to grow for the rest of the season. In midsummer (July 31) force the crowns of the plants that were not harvested in the spring to send up new spears by mowing down the foliage. Mow a few plants at a time, perhaps three to four plants each week, to ensure a long-term continuous supply of spears. Typically, summer-forced plants produce one large flush of spears, and then their numbers decline. If rainfall is short in summer, water the summer-harvested bed for good spear production. A light mulch will help keep the soil surface from becoming too hard for the shoots to break through easily. If you choose to practice this method, keep the spring- and summer-harvested plants separate. Never force spring-harvested plants in midsummer; otherwise, you risk weakening the crowns.

In all asparagus planting, cut the foliage down to 2-inch stubs in late winter after they turn brown, before the spears emerge. Letting the ferns turn brown allows nutrients to be exported from the foliage into the crowns for next year's growth. Leaving the ferns delays emergence of the first spears, which comes in handy if you expect late hard freezes.

After harvest, process or refrigerate immediately. Asparagus can be frozen or canned.

## PROBLEMS

Plants harvested too heavily too soon often become weak and spindly, and the crowns may never recover. Crown rot or poor production may occur in heavy soil that is inadequately prepared. Water stress during the first two months (while establishing a root system) can reduce yields during the life of the bed.

The primary insect pest is the asparagus beetle. Adults and larvae feed on spears and ferns. Diseases that may occur in the home garden include rust, Fusarium crown rot, soft rot and root rot. To prevent Fusarium crown rot, choose a spot that has never been planted to asparagus. Make sure the soil pH is 6.5 to 7.5. Plant a Fusarium-resistant hybrid, such as **Jersey Gem**, **Jersey Giant** or **Jersey Knight**. In established (2-year-old) plantings, apply ½ to 1 pound of rock salt (sodium chloride) per 20 feet of row in the spring when spears emerge.

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