

# Asparagus

(*Asparagus officinalis*)

## Recommended Varieties

500w  
Mary Washington  
UC72  
UC157

## Disease Resistance

R  
F  
F

Asparagus is a very hardy, perennial, cool-season vegetable which can live from 12 to 15 years or longer. It is one of the most valuable early vegetables and is well adapted to freezer storage. During the harvest period, spears develop daily from underground crowns. Asparagus does well where winters are cool and the soil occasionally freezes at least a few inches deep.

Start asparagus from seed or 1 - to 2-year-old crowns. (The crowns are rhizomes -fleshy stems that store food for future plant growth -- with roots attached on their undersurface and the buds of nascent spears sticking up.) For best results, buy crowns from a respectable nursery. 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 fall. Crowns are usually set out in winter or early spring. See Table 2, Vegetable Gardening at a Glance: How to Plant and Store, to determine the best planting dates in your area of the state.

Choose a site 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 wood ashes or a combination of several of these. 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. 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 3 rows. Mix the topsoil that has been removed with organic matter, ideally well-rooted manure, and spread about 2 inches of the mixture in the bottom of the trench or bed. Set the plants 12 inches apart, mounding the soil slightly under each plant so that the crown is slightly above the roots. Crowns should be 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 2 weeks) until the trench is filled. Water if rainfall is inadequate.

Asparagus takes several years to mature. Asparagus shoots (spears) should not be harvested the first season after crowns are set. After spears shoot up, let them leaf out so that the foliage can nourish the growing roots and rhizome for future production. Harvest lightly for 3 to 4 weeks the second year. The fleshy root system still needs to develop and store food reserves to support perennial growth in future 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 2 seasons, and harvest lightly the third. When the asparagus plants are in their fourth season, they may be harvested for 6 to 10 weeks per year.

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

Harvest spears daily during the harvest period and use the asparagus or refrigerate it immediately in a plastic bag. The 6- to 8-inch spears are best, and should be snapped or cut off just below the soil surface. If the asparagus is allowed to get much taller, the bases of the spears will be tough. Cutting too deeply can injure the crown buds that 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, allow the spears to grow and leaf out. 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 plants can support each other.

There are several ways to extend the harvest period of your asparagus planting. One method is to plant at different depths (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.

A second technique for extending asparagus harvest has been the subject of university research and is highly recommended for home gardeners who have plenty of space. Plant double the amount of asparagus needed for your household. Harvest half of the plants as you normally would in early spring; 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 July or August. This causes the crowns to send up new spears, which can be harvested until late in the season. If rainfall is short in summer, it will help to water the 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 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 freezing weather or when the foliage yellows. A 4- to 6-inch mulch of compost, manure, leaves, or other material added at this time will help control weeds and add organic matter and nutrients.

**Nutritional Value of Asparagus**

Serving size:	1/2 cup, boiled (90g)	Primary Nutrients	%RDA(m)	%RDA(f)	
Calories	22	Folic acid	132mcg	66	73
Fat	0.3 g	Vitamin C	10 mg	17	17
Calories from fat	12%	Vitamin A	48 RE	4.8	6
Sodium	10 mg	Vitamin B6	0.11 mg	5.5	6.9
Protein	2.3 g	Iron	0.66 mg	6.6	4.4
Carbohydrate	3.8 g	Riboflaven	0.11 mg	6.5	9.2
Water	83.0 g	Thiamine	0.11 mg	7.3	10
				<u>% Min. Requirement</u>	
		Potassium	144 mg		7

**Problem Diagnosis for Asparagus**

<b>What the Problem Looks Like</b>	<b>Probable Cause</b>	<b>Comments</b>
Pustules on stems and leaves are reddish-brown, orange, or black. Tops turn yellow, brown, and die back.	Rust. Caused by the fungus <i>Puccinia asparagi</i>	Prevalent in humid areas. Use resistant varieties. Sulfur is helpful. Cut down diseased ferns at crown and destroy.
Spears weaken, wilt, turn yellow, and then brown. Roots reddish.	Fusarium wilt. Caused by fungus <i>Fusarium oxysporum</i> or <i>F. moniliforme</i>	Destroy infected plants. Use soil solarization methods. Introduced on transplants. Rotate planting area.
	Root rot fungi	Rotate. Remove plant debris Plant in well-drained area.
Bent spears, drought-stricken white or light green	Phytophthora crown and spear rot.	Common in wet years.
Chewed leaves. Slime on leaves	Snails, slugs	Use commercial snail bad. Put mushrooms in garden as attractant. Use flashlight. Collect or stomp on them. Apply copper banding as barrier around beds.

<b>What the Problem Looks Like</b>	<b>Probable Cause</b>	<b>Comments</b>
Black stains on spears. Black eggs attached to spears.	Asparagus beetle ( <i>Crioceris asparagi</i> ) Adult is blue-black beetle. Larva is dark green-gray grub about 9mm long.	Remove infected spears. Be prompt. Wash eggs, beetles and larvae off with water. Use rotenone.
Weak, spindly plants. Too few spears.	Too early/heavy harvest Weed competition Frost injury, drought	Do not harvest too late in season. Plants cannot store enough food for next season. Allow to recover. Mulch soil to prevent freezing.
Fine whitish, yellowish stippling on shoots	Spider mites	Sulfur is effective.
Stunted plants. Rosetted. Aphids on young ferns.	European asparagus aphid. <i>Brachycoryneila asparagi</i> New pest that invaded CA in 1980s.	Incorporate ferns into soil in fall to destroy eggs.