

EASY GARDENING: ASPARAGUS

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Asparagus (*Asparagus officinalis*) is a highly desirable, early-spring vegetable best suited to the cooler areas of North and West Texas. It can also be grown in areas such as Dallas and Houston. It produces poorly in areas with mild winters and extremely long, hot summers. With proper care and in a suitable climate, an asparagus crown can last 15 to 25 years.

Asparagus is good source of vitamin A and C and minerals, and it tastes better when homegrown than when shipped into Texas from other areas.

Asparagus is dioecious, meaning that it has separate male and female plants. Grown for its stems or spears, asparagus yields 8 to 10 pounds or more per 100 square feet of bed if tended well. For most home gardeners, a 20-foot row or 100 square feet of bed is adequate for a family of four. That's equivalent to 20 planted crowns or 10 pounds of harvested asparagus per season.

SITE SELECTION

Because asparagus remains in the same place several years, it is important to select the right spot and prepare the seedbed well. Asparagus does best in full sunlight and deep, well-drained, sandy or light-textured soils. Asparagus plants make a good border around the edge of a garden or along a fence.

SOIL PREPARATION

Before planting, make sure that the soil is free of trash, soil insects, and perennial weeds such as johnsongrass or bermudagrass. Avoid sites where yellow nutsedge grows, as this indicates poor drainage, which is unsuitable for asparagus production.

In late fall, spread a 3-inch layer of organic matter such as manure, rotted sawdust, or compost over the beds. Till or spade them to a depth of 10 to 12 inches, and turn the soil to cover all organic matter.

Asparagus grows well in high-pH soils and poorly if the soil pH is below 6.0. Test the soil before planting the beds and add lime if needed to adjust the pH to 6.5 to 7.5.

VARIETIES

The hybrid asparagus cultivars 'Martha Washington', 'UC 157', 'Jersey Giant', and 'Mary Washington' produce better than the standard cultivars. Male asparagus cultivars such as Jersey types ('Jersey Giant', 'Jersey Knight', and 'Jersey Supreme') are more productive and resist disease better than the female cultivars ('Washington' types). Also, female cultivars are less vigorous and produce many red, berrylike fruits that become volunteer weeds in the garden.

A purple asparagus cultivar ('Purple Passion') with green flesh and large spears is available for home gardens.

PLANTING

Asparagus is grown from 1- or 2-year-old crowns planted in January or February, or as soon as the ground can be worked. Crowns can also be grown from seeds planted in flats or peat cups. It takes at least a year to grow a good crown. To shorten the period from planting to harvest, buy and plant healthy, vigorous, 1- or 2-year-old crowns from a nursery, garden center, or seed catalog.

After the asparagus beds are tilled, mark rows 5 feet apart. Dig a furrow 4 inches wide and 4 to 12 inches deep. Separate the crowns by size, and plant those of similar size together for best uniformity in spear size at harvest.

Spread super phosphate fertilizer (0-46-0) as a band in the furrow at a rate of 2.0 pounds per 1,000 square feet or 0.75 ounce per 20-foot row. Place the crowns 12 to 14 inches apart in the furrow. Planting too closely can cause small spears. Wider planting results in larger spears but lower total yield. In loose soils, plant the crowns 6 to 12 inches deep; in heavier soils, plant them

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4 to 6 inches deep (Fig. 1). Cover the furrow with 1 inch of compost topped by 2 to 3 inches of soil. Firm the soil around the roots.

Over the season, fill the furrows gradually as the shoots grow. This covers small weeds, and they die from lack of light. By the end of the first season, the furrow should reach its normal level (Fig. 1). Control weeds, but do not injure the crowns. If the crowns are planted deeply, you can cultivate the bed with garden tools or tiller (do not till too deep) without damaging the crowns.

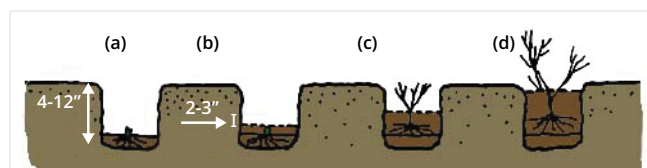


Figure 1. (a) Planting crown; (b) immediately after planting; (c) several weeks after planting; (d) at the end of the season.

An alternative planting method is to plant the crowns at the suggested depth and immediately fill in the furrow with soil to its original level. Using this method, you do not need to gradually cover the crowns with soil, as long as the soil is not compacted over the newly planted crowns.

It takes 2 to 3 years from the time the crown is planted until the bed is in full production. When conditions are favorable, buds arise from the crown and develop into edible spears. If not harvested, the spears will develop into fernlike stalks. From these stalks, the mature plant manufactures food and stores it in the underground crown. This reserve supplies the energy necessary to produce spears the following year.

FERTILIZING

Before planting a new asparagus bed, broadcast and spade in or incorporate $\frac{1}{4}$ pound of nitrogen, phosphate, and potassium per 20 feet of row or as directed by a soil test report.

For established beds, scatter 2 pounds of 10-20-10 fertilizer (or its equivalent) per 20 feet of row before growth begins in the spring, late January, or early February in most areas of Texas.

After the last harvest, apply an additional 1 to 2 pounds per 20 feet of row. If available, use a nitrogen fertilizer such as 21-0-0 at this time. Always water the fertilizer into the soil.

WATERING

Asparagus plants need frequent, deep watering. Water the beds thoroughly, and allow the top 1 inch of soil to dry before watering again. The time varies from 3 to 5 days, depending on soil type and temperature. In sandy soils, asparagus roots can reach 10 feet deep if adequate soil moisture is available.

CARE DURING THE SEASON

Asparagus competes poorly with weeds. For asparagus to grow vigorously, weeds must be controlled in the first 1 to 2 years of its establishment. To suppress weeds, spread a 4- to 6-inch-thick layer of organic mulch, such as hay, straw, compost, wood chips, or grass clippings.

Asparagus beds require little care after the first 2 years of establishment. Keep weeds pulled or hoed from the beds. To avoid damaging the spears, control weeds early before the spears emerge. Till the soil when fertilizer is applied early in the season before the spears begin growing (Fig. 2).

At the end of the harvest season, control weeds by raking lightly or mulching. Apply fertilizer and till lightly 1 to 2 inches deep to kill weeds. Cover the bed with a 3-inch layer of clean straw, compost, or other mulch material. Water it thoroughly, and allow the asparagus to grow the rest of the year. This helps ensure a good harvest the next year (Fig. 3).

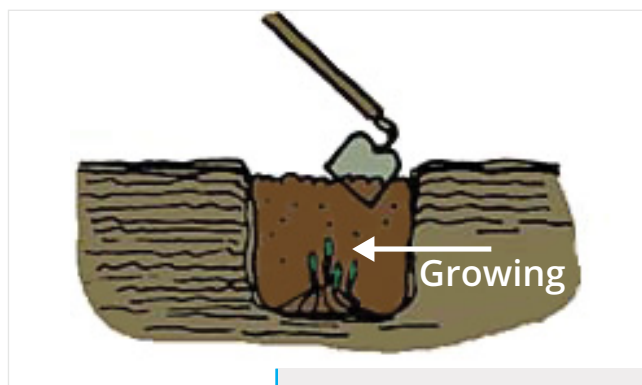


Figure 2. Till the soil early in the season before the spears emerge.

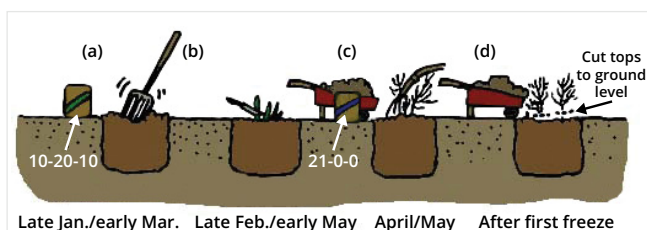


Figure 3. (a) Remove mulch, fertilize and till; (b) harvest; (c) after last harvest, fertilize and mulch; (d) remove tops and mulch with manure.

After the first hard frost or freeze of fall, cut off the fern tops at ground level and mulch the bed with manure. Burn or compost the fern tops to eliminate sources of insect eggs or disease reinfestation. In southern areas, the fern may not be killed by a freeze, so it should be removed in late November when the ferns turn yellow. Any spears that sprout may be removed and eaten.

A post emergent herbicide such as glyphosate could be used against weeds before asparagus growth begins in early spring.

HARVESTING

Harvest asparagus spears from established beds for about 8 weeks, depending on the area. Do not harvest during the first 2 years after planting. This waiting period enables the underground crown to grow and store enough reserves for a strong harvest for many years to come.

Harvest the spears when they are 4 to 10 inches long. To prevent the spears from becoming fibrous, harvest at least every other day. The fibrous condition is caused by overmaturity or inadequate fertility. Spears with loose or opened heads are too mature.

To harvest, snap off the spears by hand at ground level. Never snap asparagus spears above the ground or allow a stub to remain.

An alternative method is to use a knife to cut the spears 1 to 2 inches below the soil level (Fig. 4). To avoid damage to the developing buds in the crown, never cut the spear too deep. However, this method is not recommended because the knife may spread diseases from crown to crown.

Stop harvesting when the spear diameter becomes less than $\frac{3}{8}$ inch or when the spear heads open up with rising temperatures.

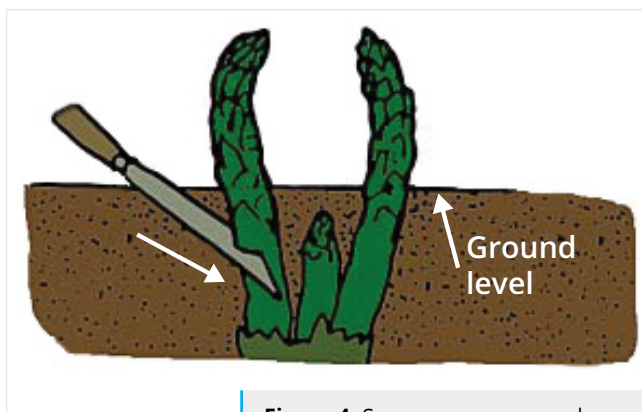


Figure 4. Some asparagus gardeners harvest by cutting the spears 1 to 2 inches below the ground level.

Some gardeners prefer white asparagus. This is grown by using mounds of soil or mulch to deprive the spears of light. White asparagus has a milder flavor and is preferred in gourmet cuisine. When the asparagus head barely emerges through the mulch mound, use a knife to cut the spears at the desired height.

White asparagus is grown by covering an asparagus row with black plastic supported by wire hoops. The covering is opened on one side for harvest, then placed into position again immediately after harvest. The plastic tunnel structure is removed when the harvest season is over. Culture and pest control of white asparagus are similar to that of green asparagus.

INSECTS

The most significant pest of asparagus is the asparagus beetle. Left unchecked, this beetle can greatly damage asparagus in a short period. The beetle overwinters (spends the winter) in crop residue or trash in the garden or in the border.

If you see beetles feeding on asparagus, remove them by hand or spray them with Surround (organic insecticide) or Sevin.

DISEASES

If you select a good site with proper drainage and pH, you can reduce if not prevent the establishment of many asparagus diseases. Common diseases that attack asparagus are crown rot and rusts; they can be controlled with organic chemicals such as sulfur or potassium phosphite.

SERVING

After harvest, asparagus loses quality very rapidly—the sugar content declines and the amount of fibrous material increases. Use spears with compact heads; those with loose heads are fibrous and do not keep well.

Asparagus can be stored up to 3 weeks in plastic bags in the refrigerator. For longer storage, blanch the asparagus spears 3 to 5 minutes, package, and freeze them.

For information on preserving and serving asparagus, contact the county Extension agent.

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