

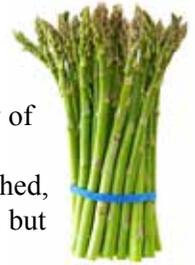


Growing Asparagus

Asparagus is one of the very popular home garden vegetables. It is easy to grow; you plant it once, and then harvest spears from the garden, early each spring, for 10 to 15 years. Besides over-wintered carrots and onions, asparagus is one of the earliest vegetables that can be harvested from the garden. A row of asparagus 50 feet long can easily supply enough fresh asparagus for a family of six.



Growing asparagus requires some attention when first planted, but once the plants are established, they will be productive for years to come. The asparagus season is considered to be in the spring, but you'll find this popular vegetable in the grocery store year-round.



Planting Asparagus

Asparagus is a permanent vegetable crop, not an annual crop. Soil preparation is extremely important when you first plant asparagus; you can't do it right 'next time'. You may consider building a raised bed just for your asparagus. A raised bed is a good way to contain asparagus plants, and as a bonus, it will provide the perfect growing conditions.



Spread four to six inches of composted mulch and five pounds of **6-10-4 Vegetable Garden Fertilizer** per 100 square feet of garden area. Roto till the area twelve inches deep.



Dig a trench six to eight inches wide, and ten to twelve inches deep. Space your rows one to three feet apart. If you plant your asparagus roots deep in the soil, you can harvest longer spears, by cutting them deeper in the soil.

Place your asparagus roots twelve to eighteen inches apart in the trench. Dust them with **Bonide Garden Dust**, to prevent insects and diseases from killing the tender new roots. Spread the roots out and cover them with two inches of soil. Do not completely fill in the entire trench when you first plant them.



As new shoots begin to grow, gradually cover them with more soil. The goal is to slowly backfill the trench. By the end of the summer, the trench should be back to ground level. Be careful not to cover the new shoots with too much soil, or fill in the trench too fast, or the asparagus roots may die, before they have a chance to establish their roots.

Asparagus love water, but be careful not to over water your new plants; the trench will collect water, and too much water may drown your new plants.

Asparagus can tolerate some shade, but full sun produces more vigorous plants, and helps minimize disease. Asparagus grows best in soils that warm up quickly in the spring, and drain



well during the summer; standing water will rot the roots.

Fertilizer and Water

Fertilize asparagus plants twice each year for maximum yield. Fertilize with **Dr. Earth All Purpose Plant Food, 16-16-8 Multipurpose Fertilizer**, or **21-0-0 Ammonia Sulphate Fertilizer**. Fertilize asparagus plants before they start growing, early in the spring, and then fertilize them again after you are finished harvesting them.



Don't skimp on water: asparagus love water. Asparagus grows naturally along ditch banks and streams. Heavy top growth is desirable, so give them plenty of water and fertilizer, and then watch them grow.

Caution: Do not keep your asparagus plants soggy-wet all the time, they need to dry out between waterings.

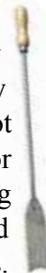
Asparagus plants grow fast and can take over the entire garden, if they are not kept under control. Plant them in an area where they can be confined naturally (such as a grow box), or thin them regularly to keep them in bounds.

Harvesting Asparagus

Don't cut and harvest asparagus shoots for the first two years after planting. The roots need time to build a reserve of energy. The third year should give you four to six weeks of cutting. Harvest shoots that are 1/4" to 3/8" thick and are 6" to 8" long. Cut them, or break them off, at or below ground level. The spears that you harvest underground will be white, instead of green, and they will be very sweet. Be careful not to injure the other shoots around them.



Asparagus shoots may need to be harvested every few days in the early spring, and possibly daily when the weather gets warm. Do not let the shoots get too long, or the flavor and quality, will be greatly reduced. Long shoots will be much more tough, and much less sweet, than the shorter shoots.



Stop harvesting asparagus when the shoots begin to get smaller in diameter, when the weather starts to get hot, when the flavor starts to diminish, or when the spears start to get woody.



After the harvest season is over, let the plants produce large, fern-like leaf stems for the rest of the summer. These leaves produce energy for the roots to store, for next year's harvest.

You should remove the asparagus leaf stems after the frost has killed them in the fall. It is important that you wait until all of the foliage has died back, and turned yellow or brown, and then trim them off one to two inches above the ground. The exception: cut down female asparagus stems before they set seed (red berries); seed production takes energy from crowns and reduces next year's crop.

After you cut back the top growth, mound 2 or 3 inches of soil over crowns, or add 2 to 3 inches of well-aged manure or compost, to protect roots from cold temperatures.



Crowns grow upwards about 1 inch each year. By adding soil, or compost, over the asparagus crowns each year, you increase the depth of the crowns, which in turn, increases spear size and tenderness the following spring.

A decline in spears is commonly the result of lack of nutrients; be sure to fertilize your asparagus patch regularly.

When spears become too spindly, the crowns may have grown too close together. The older plants should be thinned out.

Insect Control

The only real pest of asparagus plants is the asparagus beetle. Both the adults and larvae of the asparagus beetle can damage plants. This insect will not kill the plants, but it makes the asparagus less desirable to eat, just like the little green worms that get into broccoli and cabbage.



Clean up the asparagus patch and remove dead leaf stems, and other debris in the garden, to eliminate the winter hibernating areas for this asparagus beetle.

Other pests to watch for: Snails and slugs eat leaves. Spider mites suck plant juices causing stippling. Cutworms eat the shoots near the soil surface.

You can dust, or spray your plants, with either **Bonide Eight®** or **Pyrethrin** to control these pests, if they become a problem. These two are fairly safe insecticides, that can be used within a few days of harvesting. Neem oil, Diatomaceous Earth, Insecticidal Soap and Spinosad are other organic products you can use.



Remember: Even organic insecticides are poisonous. Be sure to always wash your plants, and your hands immediately after harvesting, and wash your plants again before you eat them.

Be sure to read the label on every pesticide container - every time - before using the material. Pesticides must be applied only as directed on the label, to be in compliance with the law. The label will indicate how long you should wait to harvest the crop, after you apply the pesticide.

Varieties

Mary Washington - This is the variety that everyone has grown for the last three decades. It produces very sweet and flavorful spears. It is very hardy and easy to grow. This variety produces both male and female spears. The male spears are the thick stems that you harvest. The female spears are the thin spears with fern-like leaves that produce flowers and set seeds. The female spears are not edible, and take away some of the stored energy, but they help produce the energy necessary for the next season's growth.



It produces early, long, straight, dark-green spears with tight purpling tips. The cutting season can last up to 60 days.

Jersey Knight - This variety has been developed to produce more male spears and fewer female spears. The male spears are very large, sweet, and have a good asparagus flavor. The spears are tender, succulent, and bright green with purple tips. Plants are vigorous and resistant to rust, fusarium, and root and crown rot.



The plants are not quite as hardy as Mary Washington, and may need a little extra care to maintain their vigor. However, they are much more productive than other varieties, and are well worth the little "extra care".

Sweet Purple. The spears produced by Sweet Purple have several qualities which make it quite different than common green asparagus. The deep-burgundy coloration produced in these spears is the most striking difference. The spears are generally larger, and much more tender than its green counterpart. The spears are less stringy. Sweet purple asparagus has 20% higher sugar content. Because of this extra sweetness, this variety is often eaten raw. When cooked, the sweetness gives this asparagus a mild, nutty flavor.



More Resources:

<http://extension.usu.edu/files/factsheets/asparagus.pdf>

<http://aggie-horticulture.tamu.edu/archives/parsons/vegetables/asparagu.html>

<http://extension.usu.edu/files/publications/factsheet/asparagus-beetles07.pdf>

<http://utahpests.usu.edu/TPM/htm/vegetables/vegetable-insect-disease/asparagus-beetles07/>

<http://extension.usu.edu/admin/files/uploads/viva%20vegetables%20asparagus%20recipes.pdf>

<http://www.harvestotable.com/2012/03/asparagus-growing-and-care-calendar/>



The Following Questions and Answers are copied directly from the Texas A&M website.

<http://aggie-horticulture.tamu.edu/archives/parsons/vegetables/asparagu.html>

1. Q. I have just purchased some asparagus plants. How should I plant them?

A. Prepare a planting bed by digging out unsuitable soil and replacing it with an organic mixture of 1/3 sand, 1/3 soil, and 1/3 sphagnum moss, compost or potting soil. Plant the asparagus 18 to 24 inches apart in a trench with the crown (buds) 6 inches below the ground level, but with only a thin layer of earth over them. As the growing season progresses, gradually fill in the trench.

2. Q. When should asparagus plantings be divided?

A. Divide asparagus roots during the winter after the tops have been removed. The tops will freeze in North Texas, but in many areas of South Texas they will have to be cut back to produce a crop next year. During this time the roots can be divided easily into individual plants for replanting.

3. Q. How long after planting asparagus can I harvest the first spears?

A. If you plant seed, you should wait 3 years before the first harvest. If you start from 1-year-old crowns (the recommended manner), harvest can begin to a limited degree the next year. Harvesting early will drastically reduce yield as well as quality of home-grown asparagus.

4. Q. How long can I harvest asparagus in the spring?

A. Most home gardeners in Texas harvest asparagus too long in the spring. Length of harvest will depend a great deal on location within the state, but generally the harvest should extend 4 to 6 weeks from the first harvest in early spring. Complete harvest in early spring followed by selective harvest allowing a few spears to develop into ferns is recommended.

5. Q. When I finish harvesting asparagus spears, how should I care for them during the rest of the year?

A. Allow the spears to fully develop into ferns. An occasional selective trimming or pruning can reduce the amount of top growth. Occasional light fertilizing and adequate moisture will help the plant develop sufficient top growth for good spear production.

6. Q. Each year my asparagus produces fairly well, but many of the spears are bent and crooked. What causes this?

A. Asparagus spears grow extremely fast and are highly sensitive to mechanical injury from cultivation, insect feeding or wind-blown soil particles. Spears injured from any cause will grow slowly. Rapid growth on the opposite side of the spears causes them to curve and bend toward the injured side.

7. Q. Can table salt be used for weed control in my asparagus bed?

A. Yes, in limited amounts. Asparagus is more salt tolerant than most vegetable plants, so salt may be used around the growing plants for weed control. However, excessive amounts of salt used in any one season, or salt accumulation over the years, can harm asparagus plants and subsequently reduce spear production. An application of glyphosate herbicides such as Roundup and Ortho Kleenup after the final harvest and when ferns are less than 6 inches tall will control bermuda grass and weeds. Follow label instructions. Certain pre-emergence herbicides can also be used at this time to prevent weed seed sprouting during the growing season.

8. Q. What causes my asparagus spears to get smaller and smaller each year?

A. This condition occurs in the warmer areas of the state, primarily in South Central and South Texas. Spear production is primarily the result of food accumulated in the root system the previous year. If this amount of stored material is decreased because of high temperatures, especially in the fall, or poor growing conditions, spears will be smaller the following spring. These conditions over a long period will gradually result in smaller and smaller spears each year.

9. Q. I have asparagus plants which have grown four feet tall this year. How should I culture them this year and when can I harvest? Also, some plants have red berries and some don't. Why?

A. Please read 'Home and Garden' for all you wanted to know about asparagus (but were afraid to ask). As for the red berries, my readers always have to drag sex into the otherwise respectable subject of horticulture. Asparagus is unusual, among our garden plants, in its flowering habit. While nearly all of our vegetables bear both stamens and pistils (containing pollen cells and egg cells, respectively) on the same plant or in the same flower, asparagus has two kinds of plants. About half bear only staminate (male) flowers; the others bear only pistillate (female) flowers from which the little red seed-bearing fruits develop. Both kinds must be grown near each other if seeds are to be obtained.

10. Q. I know it is recommended to cut the tops of asparagus in late November to force dormancy before sprouting and harvesting begins in early spring. Cold in some areas is not sufficient to kill the tops and cutting is to physically force dormancy but this year the tops of my asparagus plants died before any cold weather occurred. When I removed the dead tops, they appeared to have rotted off at ground level. What happened? Is my asparagus planting dead?

A. Plant pathologists at Texas A&M have diagnosed rhizoctonia fungus as the culprit. Wet conditions allowed the fungus to weaken plants at the soil line causing a rotted appearance. Tops died and now have a blacken appearance. Hopefully, the fungus just affected asparagus at the soil line and did not enter the below ground crowns. If this was the case, asparagus production should resume as normal next spring. Don't feel bad; almost everyone experienced the same condition. Asparagus beds with a heavy, poorly drained soil type were especially susceptible.

11. Q. My family always looks forward to the first harvest of asparagus from the garden. Asparagus is usually the first fresh growth of the garden every spring BUT the first spears (sprouts) we harvest are always tough. What causes toughness in asparagus and how can it be prevented?

A. Toughness of asparagus is due to the development of fiber cells with thick walls containing a material called lignin. These thick-walled cells or fiber cells are located in two different tissues in different areas of the asparagus spear. Some fiber cells are found in the vascular bundles which are scattered throughout the spear with more fibers found near the base than the tip. Therefore, fiber content is very low at the tip of asparagus spears and increases dramatically toward the base. Small diameter spears contain a higher percentage fiber on a weight basis and are perceived to be tougher than larger diameter spears. Therefore, tall spears of small diameter have a higher percentage fiber and are perceived to be tougher.

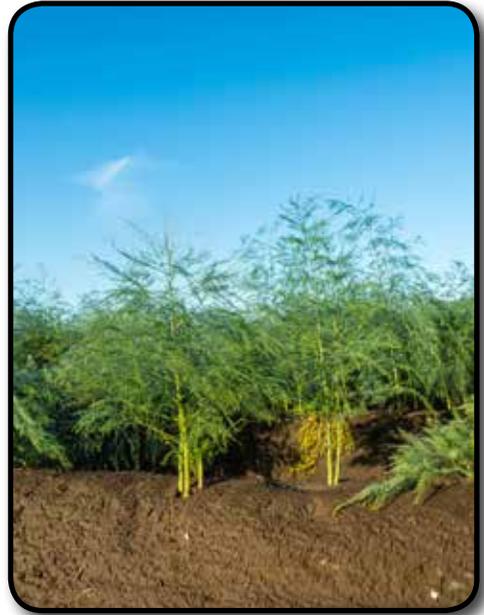
Low temperatures (less than 50 to 55 degree F.) during the period prior to harvest results in higher amounts of fiber in spears of equal length. This is due to the fact that growth rate is slowed greater by low temperature than fiber development. It takes longer for spears to reach the height for harvest and fiber development continues. Spears harvested after a period of warm temperatures always have less fiber than asparagus harvested after cool temperatures.

There are several post-harvest factors which affect the further development of fiber after harvest. Most rapid fiber formation occurs during the first 24 hours after harvest and this fiber formation can be slowed down dramatically by cooling the asparagus as soon as possible after harvest. Fiber development will increase more if the storage temperature is too high and the rate of development is quite slow if the temperature is at or near 36 degrees F.

Water loss after harvest tends to increase fiber development. So decreasing water loss by raising the relative humidity, using film wraps or placing the butt ends on a moisture-containing pad will decrease fiber development.

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*Asparagus
Knife*

