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Vegetable Gardening

Growing Asparagus

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Asparagus (*Asparagus officinalis*) is a popular vegetable in most Idaho gardens. Few vegetable crops are easier to grow or more consistent in production. Asparagus production in the U.S. is most successful in areas where freezing temperatures or drought terminates plant growth and provides a rest period. Temperature variations can range from 115°F in the Imperial Valley of southern California to –40°F in Minnesota without adversely affecting production. Once fully established, in about 3 years, asparagus can remain productive for 15 years or more if given adequate care. Asparagus is the earliest harvested spring vegetable, and it is an excellent source of thiamin, vitamin A and riboflavin. A serving of 6 spears contains only 20 calories.

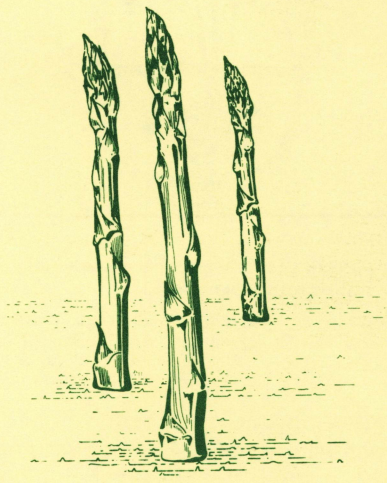
Varieties

Asparagus is a dioecious plant, which means that male and female flowers are on separate plants. Usually the ratio of male to female plants is about 50:50. Male plants produce 25 to 40 percent more spears, but the female's spears are larger. Female plants also produce seeds which sometimes can become "weeds" in the garden.

Mary Washington and Martha Washington were the first two asparagus varieties to exhibit resistance to the disease, asparagus rust. They were developed by Dr. J. B. Norton of the USDA in the early 1920's. Today Mary Washington is still the leading variety, while Martha Washington has become less popular. Other varieties, mostly strains of the two "Washingtons," may prove satisfactory in the home garden, but they have not been fully tested under Idaho conditions.

Planting Site

Since asparagus is a perennial crop, it should be planted at the side of the garden so that garden plowing and cultivation of annual crops can be conveniently accomplished. Also, because of its height, it is wise to plant asparagus in the north or east sides of a garden to avoid shading other vegetables. Gardeners using large tractors to prepare the soil and cultivate may find it more convenient to put the asparagus bed in the middle of the garden. Asparagus needs a sunny location that will receive a minimum of 7 hours of sunlight per day.



Asparagus is susceptible to late spring frosts that can kill emerged spears and delay subsequent production. For this reason asparagus beds should not be established in low areas or in other frost susceptible locations.

Soil

Asparagus grows best in a deep, well-drained, sandy loam or loam soil. Good drainage is essential because soils that tend to stay wet cause asparagus to lose vigor or die from root rots. Asparagus roots penetrate down to a depth of at least 6 feet, so shallow soils, no matter what texture, should be avoided. A pH of approximately 6.5 to 7.5 is best for optimum growth. Asparagus will not tolerate extreme acidity. It will grow well in soils that have a salt content too high for most other crops. Although asparagus tolerates less than optimum soil conditions, yields from such plantings are likely to be reduced and the life of the planting shortened.

Since asparagus plants remain vigorous and productive for as long as 15 years, gardeners should take the time before planting to prepare the soil correctly and thoroughly with the necessary organic matter and fertilizer. Begin preparing soil for an asparagus bed in the fall. Break up the soil to a depth of 18 inches and thoroughly work in

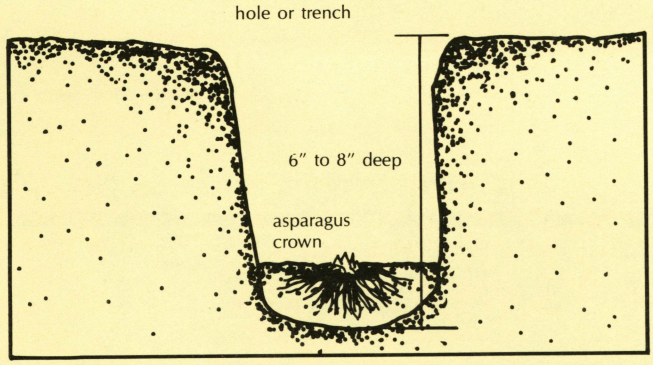


Fig. 1. First, dig a trench 12 to 18 inches wide and 6 to 8 inches deep. Then spread a small amount of compost or rotted manure in the bottom and cover it with an inch of garden soil. Finally, set the crowns into the trench about 18 inches apart.

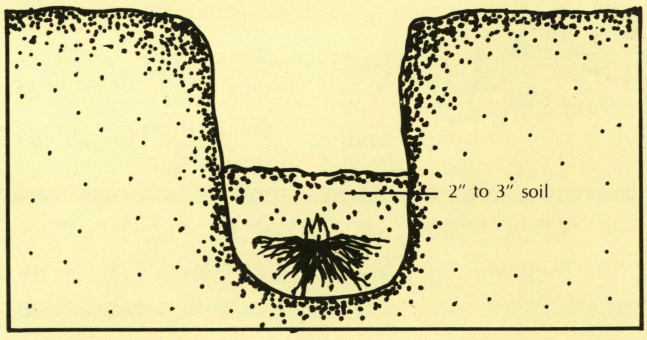


Fig. 2. After setting the crowns, cover them with about 2 inches of soil.

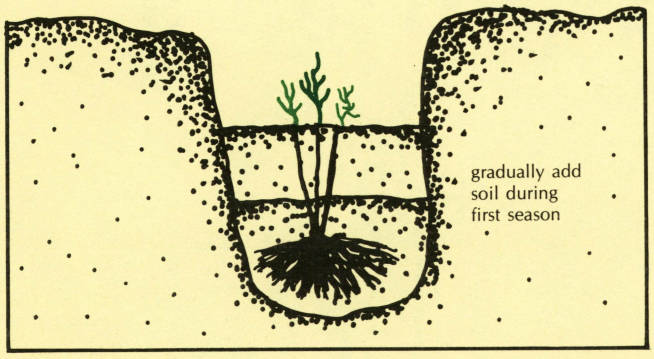


Fig. 3. As asparagus plants begin to grow, gradually fill the trench with soil or rotted manure.

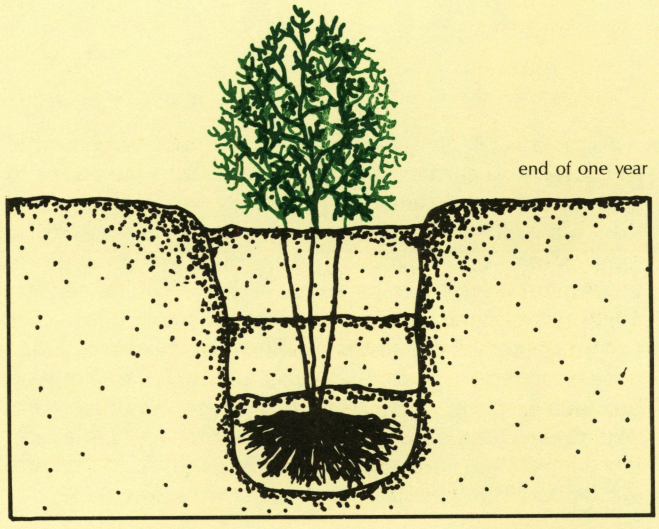


Fig. 4. At the end of the first year, the asparagus plant will be established, and the trench should be filled with soil or rotted manure.

large amounts of organic matter, such as well-rotted manure. At the same time, apply 4 to 5 pounds of 5-10-10 fertilizer per 100 square feet. The bed should be 3 to 4 feet wide to promote optimal root growth.

Planting

Asparagus plantings can be established by using either seed or crowns. Crowns are fleshy stems with an established root system.

Most gardeners purchase crowns to speed up production time. If you purchase crowns, make certain that they have not been allowed to dry out. Choose large, 1-year-old crowns if possible. No advantage is gained from planting 2- or 3-year-old crowns which are more expensive and more difficult to plant.

Soil type will determine the depth at which to plant crowns. A common method of planting in good soil is to dig a trench 12 to 18 inches wide and 6 to 8 inches deep. Plant at the shallower depth if the soil is heavy. Spread a little compost or rotted manure in the bottom of the trench and cover it with an inch of garden soil. Next, set the crowns into the trench about 18 inches apart spreading the roots so they lie flat (Fig. 1). Cover the crowns with about 2 inches of soil (Fig. 2). During the growing season, gradually finish filling the trench with soil or rotted manure being careful not to cover any of the asparagus foliage (Figs. 3 and 4).

This delayed filling of the trench accomplishes two things: it covers up small weeds down in the hole or trench, and it allows asparagus to develop more extensively than it would if it were to grow through 6 to 8 inches of soil in the beginning.

If you want to grow asparagus from seeds, you have two choices: start them indoors in the winter to produce transplants (the most reliable method), or sow seeds directly into the spring garden. For transplants, sow seeds about ¾ inch deep in pots using a commercial potting soil. Keep the pots 75 to 80°F until the seeds germinate, then reduce the temperature to 70 to 75°F during the day and 65°F at night. Give the seedlings full sunshine. The transplants need 12 to 15 weeks to grow. They can be set out after the last frost in spring.

If you prefer to sow seeds directly into the garden, do so about 2 weeks before tomatoes are normally set out in your area. Plant the seeds ¾ to 1 inch deep and 3 inches apart in the row. After 1 year you can transplant the young plants to a different location if necessary. Carefully dig the plants while they are still dormant and replant immedi ately as described earlier for crowns.

How Much To Plant

Each crown planted will produce about ½ pound of spears annually when fully established. In small gardens, 25 to 50 feet of row will supply the average family with

enough asparagus for table use. For freezing and canning, increase the row length or plant additional rows.

Maintaining the Bed

To produce high spear yields consistently, you must fertilize before the plants begin to grow in the spring and again right after harvest to encourage the growth of foliage. Apply about 1¼ pounds of 5-10-10 fertilizer per 100 square feet of bed each time.

Since asparagus plants have extensive root systems, precise watering is not critical for an established planting. A good soaking of the soil every 2 weeks during dry weather should be sufficient.

Weed your asparagus bed regularly but cultivate no deeper than a few inches. Deep cultivation may injure the crowns, making them more susceptible to disease. A 4- to 6-inch layer of mulch such as weed-free straw or decomposed sawdust will help reduce weeds in the planting.

Herbicides registered for asparagus can be used in accordance with the label directions, but mechanical cultivation and mulches are preferred in small plantings.

Insects

The only insects of major importance on asparagus are the asparagus beetle and the spotted asparagus beetle.

Asparagus Beetle — This beetle is about ¼ inch long, metallic blue-black with yellow-mottling and overwinters as an adult in the trash around the garden. The adults feed on the young spears shortly after they emerge in the spring. They lay black eggs that are attached singly on the end of the spear. Later, the dull black larvae feed on the ferns.

Spotted Asparagus Beetle — This beetle also overwinters as an adult in trash around the garden. Its emergence coincides more closely with the formation of berries on the asparagus ferns, since the larvae feed primarily inside the berries on the seeds. The spotted asparagus beetle does minimal damage compared to the asparagus beetle.

Both insects can be controlled with insecticides. For insecticide control recommendations, contact the local University of Idaho County Extension Office or consult the current *Pacific Northwest Insect Control Handbook*.*

Diseases

Fusarium Wilt and Root Rot — This fungus overwinters in the soil and can be transmitted by the seed to new plants. The disease is favored by high soil temperatures and is more severe on plants growing in light soils.

Fusarium symptoms include yellowing, stunting and wilting of the stalk and discoloration of vascular bundles within roots, crowns and stems. To control fusarium:

1. Plant resistant varieties.
2. Plant only transplants grown from treated seed on clean ground.
3. Rotate asparagus with other garden crops.

Rust — This fungus lives during the winter on old asparagus stems. The presence of the disease depends upon environmental conditions. Rust is usually much less destructive in areas of low rainfall and humidity than in high-moisture areas. Rust causes the needle-like leaves of the stem to fall so the plants appear naked. Ultimately, the planting may turn brown.

Asparagus rust is usually first seen close to the ground as small red-yellow pustules on the stalks that grow after harvest. When widespread infection occurs, plant vigor is reduced and the crop matures abnormally early. The reduction in the size of the crowns and storage reserves in the crowns weakens plants and reduces yields the following season. Three actions can be taken to control rust:

1. Plant only resistant varieties.
2. Spray after harvest with a fungicide.
3. Cut or kill all volunteer asparagus in adjacent areas.

For fungicide control recommendations, contact the local University of Idaho County Extension Office or consult the current *Pacific Northwest Plant Disease Control Handbook*.*

Harvesting Period

Asparagus should not be harvested during the first two seasons. When harvest is delayed until the crowns are well developed, the plants will remain more productive over a longer period. You may harvest a few spears the third season, but only cut spears for about 3 weeks. You can cut for 6 to 8 weeks during the fourth and subsequent seasons. Discontinue harvesting when the spears decrease in size to a diameter smaller than a lead pencil. Additional harvesting will reduce plant vigor.

After harvesting, allow the fern growth to develop and build up the crown for a good crop the following season. Leave the tops to overwinter. Remove the tops by cutting at ground level before growth resumes in the spring.

Harvesting Methods

The best time to harvest asparagus is during the morning when the spears are crisp and turgid. A spear should be 5 to 7 inches long when harvested. Snap or break the spears off instead of cutting. This prevents damage from the cutting knife to spears about to emerge. Besides, a spear that is bent will break or snap at the base of the succulent portion, thus leaving the fibrous part of the stem in the earth. This tough, woody portion of the spear is usually removed during cooking preparation or left on the plate uneaten.

Refrigerate harvested asparagus spears as soon as possible. Storage at room temperature will cause them to shrivel, develop tough fibers and lose nutritive value.

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*PNW Insect Control and Plant Disease Control handbooks are published cooperatively each year by Idaho, Washington and Oregon. Each County Extension Office has a copy of the current edition.

Other College of Agriculture publications you will want to get on home gardening are:

CIS 226	Garden Vegetable Insect Control	35 cents
CIS 427	Gardening — Vegetables for Freezing or Canning	35 cents
CIS 446	Onions, Leeks, Shallots, Chives and Garlic for the Home Garden	35 cents
CIS 658	Gardening — Growing Beans and Peas	25 cents
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CIS 796	Roses: Care After Planting	35 cents
CIS 799	Vegetable Gardening — Growing Melons	35 cents
CIS 800	Growing Vegetable Seedlings for Transplanting	35 cents
EXT 617	When to Harvest Vegetables	50 cents

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