



Asparagus in the Home Garden

Asparagus, one of the most popular spring vegetables, is a hardy perennial plant that produces edible spears. Asparagus (*Asparagus officinalis*) is a native of central Asia but is grown throughout the world. For more than 2,000 years, it has been cultivated for food and valued for its medicinal properties. Early colonists brought it to America as seed.

Asparagus is a wholesome, nutritious food whether used fresh, frozen, or canned. It is low in calories but high in flavor. A serving of four spears of asparagus contains just 10 calories and only traces of fat. Compared to other vegetables, asparagus is a good source of vitamins A, B1 (thiamin), and B2 (riboflavin).

Asparagus requires low levels of maintenance. Plantings will produce good crops for 15 to 20 years if planted in a favorable location and good cultural practices are followed.

Site Selection

Asparagus grows in almost any type of well-drained soil. It will not tolerate poorly drained soil. A medium loam or sandy loam is best. Select a location on the edge of the garden or nearby that does not interfere with annual garden tillage and management.

The planting site should receive at least six hours of direct sun each day. Avoid shady sites near trees or buildings. To avoid shading other vegetables, plant asparagus on the north side of the garden.

Soil Preparation

Since asparagus occupies an area for 15 to 20 years, give careful attention to soil preparation before planting.

If barnyard manure is available, turn it under in the fall, preceding planting. If you only have a small amount of manure, put it in the bottom of the furrow at planting.

A soil test to determine fertility needs and soil pH is advisable. A neutral to slightly acidic (pH 6.7–7.0) soil is optimum. However, good production can be expected in slightly alkaline soils (pH 7.0–7.4). If a soil test indicates a pH below 6.0, apply lime (approximately 15 to 20 pounds per 100 square feet). Spread the lime uniformly over the area and deeply incorporate it into the soil.

A soil test also determines the levels of essential plant nutrients in the soil. Apply and incorporate the recommended type and amount of fertilizer into the soil. If a soil test has not been done, use a “complete” fertilizer. Apply a 10-10-10, 12-12-12, or similar analysis fertilizer at 1½ to 2 pounds per 100 square feet.

Cultivars

Several new asparagus cultivars have been introduced in recent years. Most of these new cultivars are “male” hybrids. Asparagus is a dioecious plant, meaning there are separate male and female plants. Female asparagus plants produce berries. The energy spent by female plants on berry production reduces the amount of food reserves left for spear development, reducing yields.

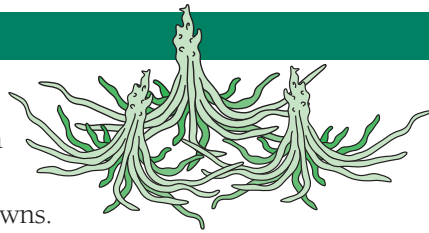
Male plants live longer and produce higher yields. Yields of male hybrids can be 1½ to 3 times higher than open-pollinated cultivars (containing both male and female plants), such as ‘Martha Washington’ and ‘Waltham Washington.’ ‘Jersey Giant,’ ‘Jersey Knight,’ and ‘Jersey Supreme’ are rust-resistant, fusarium-tolerant, male hybrid cultivars recommended for Iowa gardens.

‘Purple Passion’ is a distinctive cultivar that home gardeners may wish to try. It has large spears with purple coloration and a sweeter taste than other cultivars.

Planting

The best way to establish an asparagus planting is to plant one-year-old crowns.

Asparagus crowns can be purchased at garden centers and mail-order nurseries.



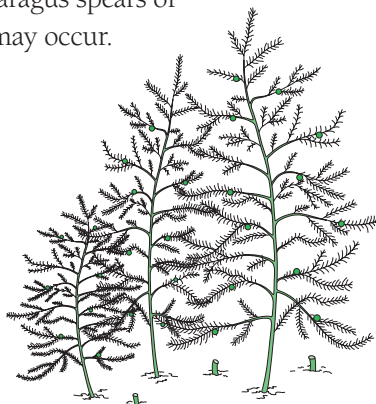
Early spring is the best time to plant asparagus in Iowa. Planting depth varies with soil type. A planting depth of 8 to 10 inches (measured from the top of the crown to the soil surface) is suggested in light, sandy soils. A 6-inch planting depth is recommended in heavier soils. Space crowns 8 to 12 inches apart in rows 4 to 5 feet apart. The bottom of the furrow should be wide enough to accommodate the roots without crowding. Place asparagus crowns in the bottom of the furrow (buds pointing upward), spread out their roots, and cover with soil. It is not necessary to fill in the furrows gradually when planting asparagus.

Weed Control

Weeds can become a serious problem in asparagus plantings. Cultivation and hand pulling are the most practical weed control measures for home gardeners. Hoeing and hand pulling should be done on a regular basis in spring and early summer. Cultivate lightly to avoid damaging emerging asparagus spears. The application of 4 to 6 inches of straw in summer also is effective in controlling weeds.

In past years, some gardeners used salt to control weeds in their asparagus plantings. However, salt is not effective in controlling many weeds. Plus, continued use of salt may result in high levels of salt in the soil, which may damage asparagus plants.

Herbicides are not a good weed control option for gardeners as few herbicides are available for use in home gardens. Glyphosate (Roundup) can be used to control difficult-to-control perennial weeds. Spot treat weed-infested areas immediately after the last harvest when all asparagus spears and ferns have been cut off just below ground level. Do not allow Roundup to get on asparagus spears or ferns as serious plant injury may occur.



Insect Pests

Asparagus Beetles

Two closely related insect pests, the asparagus beetle and the spotted asparagus beetle, occasionally attack asparagus plantings in Iowa. When asparagus shoots appear in spring, these beetles emerge from their sheltered, overwintering locations to chew on the tips and spears.



Beetle-damaged shoots are disfigured, scarred, and brown in color, making them unappealing. After the last harvest of the season, asparagus beetles feed on the fern-like growth. Significant defoliation weakens plants, reducing spear production in the following year.

Both species of the asparagus beetle are oval shaped and about 6 mm (.25 inch) long. The asparagus beetle is brilliant, metallic blue-black with six large, square, yellowish spots. The spotted asparagus beetle is reddish orange with 12 black spots. The beetles lay eggs on asparagus shoots. Larvae of the asparagus beetle are dark green to gray, black-headed, grub-like, and about 6 mm (.25 inch) long. Larvae feed on the shoot tips and foliage. Larvae of the spotted asparagus beetle are similar in size and appearance to larvae of the asparagus beetle, but orange in color. They bore into the developing berries to feed.

Control

Keeping weeds and debris out of asparagus plantings reduces sites for adult beetles to overwinter. A prompt and complete harvest also helps prevent establishment of larvae. If the asparagus planting is small and only a small number of beetles are present, handpicking may be an appropriate control. Populations of the spotted asparagus beetle larvae can be reduced by gathering and destroying infested berries. Natural and domestic predators (ducks, chickens) can help slow population buildup during the summer.

Insecticide dusts or sprays can be applied to spears or foliage when significant numbers of adults or larvae are present. A widely available insecticide for use in home gardens is carbaryl (Sevin).

Cutworms

Cutworms also attack asparagus spears. They overwinter as larvae and damage asparagus spears by chewing off spear tips in spring.



Harvesting

Allow asparagus plants to become well established before any spears are harvested. Do not harvest asparagus in the year in which it is planted and the following year. In the third and subsequent years, asparagus can be harvested until early to mid-June in Iowa. If harvest begins before April 15, stop harvesting by early June. Continue harvesting until mid-June if the first harvest occurs after April 15. Ending the harvest season in early to mid-June allows the plants to develop strong, healthy tops and to store enough food reserves in their crowns for next year's production.

For maximum yield, spears should be 6 to 8 inches long when harvested. Spears are sensitive to frost damage, so in early spring it is advisable to harvest spears prior to the 8-inch height. Harvest by cutting or snapping the spears. Use a sharp knife to cut the spears at the soil surface. Cutting below the soil surface may damage spears that have not yet emerged. Breaking or snapping also is a satisfactory method for harvesting asparagus. Break or snap the spears slightly above the ground. The harvest frequency depends on temperature and moisture conditions. If temperatures are high, it may be necessary to harvest every day. In cooler periods, harvesting may be done at 2- to 3-day intervals. "Clean cutting" is desirable during the entire harvest season. Any fern growth will delay or stop the development of new spears.

Asparagus deteriorates rapidly after harvest. Store asparagus spears in the refrigerator at a temperature of 32° to 35°F in order to retard fiber development.

Care after Harvest

The care an asparagus planting receives after the harvest season is important to future yields and quality. After the last harvest in June, apply a nitrogen fertilizer to the planting.

Apply 0.10 pound of actual nitrogen per 100 square feet. For example, an application of 0.5 pound of ammonium sulfate (21-0-0) or 0.25 pound of urea (46-0-0) per 100 square feet supplies 0.10 pound of actual nitrogen. Do not fertilize asparagus in late summer as late season growth may reduce the amount of stored food in the plant's crowns.

Allow asparagus tops to grow after the final harvest. This top growth provides the food material stored in the fleshy roots and crowns. Removing the tops during the growing season can seriously reduce future yields. Leave the tops standing over winter to catch and hold snow. This prevents deep freezing and sudden changes in soil temperature. Remove the dead tops in early spring before growth begins.

In spring before the spears emerge, apply 1 to 1½ pounds of a 1-1-1 type fertilizer, such as 10-10-10 or 12-12-12, per 100 square feet.

Revised by Richard Jauron and Ajay Nair, extension horticulturists. Originally prepared by Henry G. Taber and Vince Lawson.

The potential for contamination of surface and groundwater with pesticides is increased by usage that does not conform to label directions. Iowa State University Extension recommends that pesticides be selected and applied in accordance with label directions. It is illegal to apply a pesticide in a manner inconsistent with its labeling. Applicators should read and follow all label directions, including the use of protective clothing, mixing and handling precautions, rates and methods of application, and environment hazard warnings.

Photo credits: (1) willowgardener (flickr), (2) digital sextant (flickr), (3) sfbaywalk (flickr), (4) muffet (flickr).

...and justice for all

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue SW, Washington, DC 20250-9410, or call 800-795-3272 (voice) or 202-720-6382 (TDD). USDA is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Cathann A. Kress, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.