

Asparagus officinalis

Asparagus is a member of the lily family. It originated near the Mediterranean Sea and was considered a delicacy by the ancient Greeks. Methods were described for growing this vegetable in 200 B.C. Highly prized for its delicate flavor, "asparagus" is Greek for the work "stalk" or "shoot". It was cultivated in England by the time of Christ and brought to America by early colonists.

Asparagus is a dioecious plant, meaning the sexes are on separate plants. Usually the distribution of male and female plants is

about equal. Male plants produce 25 percent to 40 percent more spears, but female plants produce larger spears. Female plants also produce seeds that can become "weeds" in the garden. Asparagus is a perennial vegetable that will live from 12 to 15 years or longer. During the harvest period, traditionally spring, the spears develop daily from underground crowns. Asparagus does well where winters are cool and the soil occasionally freezes at least a few inches deep; it is considered very hardy.

Culture

Asparagus grows best in fertile, well-drained soil high in organic matter. Asparagus needs an open sunny location that gets at least six hours of sunlight a day. Put it at the edge or side of the garden where it won't be in the way of garden activities. Because asparagus is long lived, bed preparation is very important. Begin preparing the soil in fall of the year before planting (see Fertility, below). Start asparagus either from seed or from 1- to 2-year-old crowns. 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 June. Crowns are usually shipped and set out in late April.

Seed is best started in the greenhouse in late February or early March. Sow ¼ inch deep in sterile seeding soil at 70 to 80°F. Germination can take up to 21 days. Use 3-inch peat pots to reduce transplant shock. Direct seeding outdoors is not recommended. Seedlings may be transplanted in June; either to the final growing site or to a temporary transplant bed. Direct transplanting to the permanent site allows simple planting techniques and avoids disturbing plant growth with a second move. Transplant your asparagus starts outside into a 4-inch deep furrow that is gradually filled in as the plants grow. If using a transplant bed, dig the one-year-old crowns the next spring before growth starts.

In the early spring, plant one-year old crowns in trenches 12 to 18 inches wide and 6 inches deep. Space crowns 12 to 18 inches apart. Spread the roots out uniformly, with the crown bud side up, in and upright, center position, slightly higher than the roots. Cover the crown with 2 inches of soil. Gradually fill the remaining portion of the trench during the first summer, as the plants grow taller. Apply an additional 1 to 2 inches of soil from between the rows in later years. On heavy soils, there may be some benefit to planting asparagus in raised beds for better drainage and soil aeration.

To encourage foliage growth for the rest of the growing season, apply a nitrogen fertilizer as noted under 'Fertility' below. This is also the time to remove existing weeds, either by shallow cultivation or hand pulling. New spears will then emerge, fern-out, and provide a large canopy to cover the space between the rows. Once a dense fern canopy is formed, weed growth will be shaded out.

The tops should be allowed to remain as long as they are green. This foliage is making the food reserves to store for next year's crop. If plants have been healthy throughout the growing season, it can be helpful to leave the dead tops in place for the winter. They will collect snow and insulate the crowns. However, if insects and/or disease have been a problem, it is best to remove the tops after they turn yellow or brown at the end of the season. Remove the old tops by cutting or mowing as low as possible before the emergence of new spears in the spring.

Cultivar Selection

Plant breeders at Rutgers University have

developed all-male varieties of asparagus that out-yield the mixed male and female varieties. The most widely available of these is 'Jersey Knight'. It adapts well to heavy clay soils. Other all-male varieties include "Jersey Giant", 'Jersey Queen' and 'Jersey Gem'.

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Irrigation

Asparagus is very drought tolerant once established and can usually grow without supplemental watering because it seeks moisture deep in the soil. However, newly

planted crowns will benefit from irrigation during dry spells. Otherwise the plants will become stressed and vigorous growth will be impeded.

Fertility

Because asparagus remains in place for years, advance soil preparation helps future production greatly. Begin preparing soil for an asparagus bed in the fall of the year, before planting. Take a soil sample to your local UWEX Extension center for testing. Asparagus prefers a soil pH of 6.5 to 7.5; adding lime in SE Wisconsin should not be necessary. Add fertilizers called for in the test report; or add 2 lbs of 10-20-10 or similar analysis fertilizer per 100 square feet, tilled to a 6-

inch depth before planting. Working green manure crops, compost, manure, or other organic materials into the proposed bed is a good approach. In the spring of the succeeding years, apply 2 to 2 ½ lbs of 10-10-10 or similar analysis per 10-foot of row, before new growth appears. In the third year, apply the same amount in spring, and then again in July, immediately after the final harvest.

Harvest

The year after planting, asparagus can be harvested several times throughout a three-week period, depending on air temperatures. Research shows there is no need to wait two years after planting before harvesting. In fact, harvesting the year after planting will stimulate more bud production on the crown and provide greater yields in future years, as compared with waiting two years before harvesting. Two years after planting, the length of harvest can increase to about 4 to 6 weeks. The third year after planting and thereafter, harvesting can continue

for 6 to 8 weeks. Since the length of harvest season will vary from year-to-year depending on air temperature, stop the harvest when the diameter of 75% of the spears becomes less than pencil size. Cut spears when they are 6 to 8 inches long (no matter how large around they are). Cut 1 to 3 inches below the soil, taking care not to injure any new spears coming up. Experience gained by growing the crop will make it easier for the gardener to know when to discontinue the harvest.

Pests

The adult common asparagus beetle is bluish-brown with cream spots while the spotted asparagus beetle is orange with black spots. Both are about ¼ inch in size. Larvae of both are slug-like and cream-colored or gray with dark heads. Adults of the common asparagus beetle feed on the spears and ferns. Spear feeding disfigures them, rendering them unmarketable. Eggs laid on the spears also make them unmarketable. Defoliation of plants can occur if large popula-

tions are left unchecked. You can control asparagus beetles by handpicking adults before they lay eggs or by destroying eggs before they hatch. If you notice feeding damage, you can control the beetles by spraying with the botanical insecticides. Destruction of crop residues will eliminate overwintering sites for the beetles. For more information, consult University of Wisconsin - Extension publication A2088, Managing Insects in the Home Vegetable Garden.

Diseases

Rust is the most common and troublesome asparagus disease. Rust can reduce next year's yields to a few weak spears. It also weakens crowns, leaving them open to attack by soil-borne fungi. The disease first appears in spring as small, oval, yellowish spots on the stems and branches of wild volunteer plants. The spots later are surrounded by tiny, yellowish-orange, cup-shaped structures. Small, round to oblong, reddish-brown, powdery masses develop on stalks and leaves of plants in producing beds. Later in the season, black masses replace the reddish-brown pustules. Contact your local Extension center for more information.

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