

# Growing Asparagus

Resource: UMN Extension

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Asparagus (*Asparagus officinalis* L.) is one of the earliest producing vegetables each spring. It is dioecious, meaning that there are female and male plants, but only female plants produce berries. Generally, female plants produce larger spears, and male plants produce a greater number of smaller diameter, more uniform spears. Most of the newer hybrids, such as Jersey Giant, are all male plants, producing no seeds.

Asparagus is a perennial plant that comes back from the same expanding root system every year, and needs the rest period that freezing winters provide. A bed of asparagus can last 15 years or more, so choose the bed site carefully. Choose a fertile, sunny, well-drained site with good moisture. Late spring frosts can kill emerged spears, so find an area that is not low-lying or susceptible to frost. Because asparagus plants have deep root systems, avoid areas with shallow soils or soils prone to water-saturation.

Common varieties are the older Washington series (Mary, Martha, and Waltham), the newer hybrids such as the Jersey series (Giant, Knight, Prince), and an open-pollinated variety called Viking KB-3. Although all of these varieties have done well in Minnesota, the Jersey series can suffer winter kill in northern Minnesota at  $-30^{\circ}$  F if there is inadequate snow cover.

## PLANTING

Asparagus can be started from seeds in a nursery bed, and then transplanted to its final location in the second year. Use seed with a high germination rate, plant seed as soon as soil is workable, into level ground with sandy soil about one inch deep and spaced about two inches apart within rows. In the next year, dig crowns in early April before buds start to grow, and transplant them to the desired location. Direct seeding is not recommended because it would be difficult to establish a good stand due to slow seed germination and competition from weeds. Alternatively, purchased crowns can be planted.

Most people plant asparagus from purchased crowns because this is easier and you get a crop at least one year earlier than if planting seeds. If buying crowns, try to purchase ones that are one-year old. Older crowns can be damaged during transplanting. Plant crown buds upward in a trench or furrow, about 12-18 inches apart and 6-8 inches deep. Cover the crowns with 2-3 inches of soil immediately after planting to keep them from drying out, and then continue to add soil as the shoots emerge, until eventually the furrow is filled by the end of the first growing season. Asparagus crowns will continue to enlarge both vertically and horizontally over several years so planting at the appropriate depth is critical. The consequences of planting too shallowly could result in premature spear emergence in the spring increasing risk of freeze damage, and winter kill of the crown.

## SOIL PH AND FERTILITY

It grows best in soils with pH of 6.5-7.0, and does not tolerate extreme acid soils. Have your soil tested to determine its pH and whether you need to amend it. It is best to test soil at least every 3 years and follow test recommendations. You can add some well-rotted manure or compost, or a garden fertilizer.

In the second and third years after planting, you can incorporate well-rotted manure, compost or fertilizer in the spring prior to spear development, and again as the soil warms up. Addition of manure or compost can add micronutrients and organic matter to soil (see *Composting and Mulching*). After the planting is established, it is generally unnecessary to add fertilizer until after harvest because the root system can store large amounts of nutrients.

## WATERING

Adequate soil moisture is necessary at planting for good root and fern development. Although asparagus plants have deep roots, most of the water uptake takes place in the top 6-12 inches of soil. Asparagus plants will not show signs of drought stress, so use extra care to ensure that there is adequate water during the growing season.

## CONTROLLING WEEDS

Eliminate all perennial weeds before planting crowns. Annual weeds can be managed using shallow cultivation and by adding 3-4 inches of mulch on top of beds. Do not till soil more than 3-4 inches deep to avoid damaging feeder roots.

## HARVESTING

***Asparagus needs 3 years to develop a large root system. Spears may be harvested for two weeks the season after it is planted and up to four weeks the 2<sup>nd</sup> year. A full harvest is ok in the 3rd year.*** Leave the old asparagus ferns until spring before chopping or mowing them. After spears appear, harvest when they are 6-8 inches long. Snap spears off at the soil surface. Do not cut the spears because of the danger of damaging neighboring spears not yet emerged. Allow spears remaining after July 1 to develop into ferns.

## COMMON PROBLEMS

### ***Insects***

The most common insect pests on asparagus in Minnesota are the common and spotted asparagus beetle. They primarily damage asparagus by feeding on the spears resulting in browning and scarring. The feeding can also cause asparagus shoots to bend over into a shepherd's crook.

### ***Diseases***

Common diseases of asparagus include asparagus crown rot, asparagus rust, and purple spot. Asparagus rust causes yellow to rusty orange spots to form on asparagus stems after harvest. These release powdery orange spores that can easily be seen if a white tissue is rubbed across the infected stem. Purple spot causes sunken purple spots on asparagus spears, and tan spots with a purple border on mature stems. Plants suffering from crown rot have poor growth; leaves and stems may yellow and die back. When cut open infected crowns are brown and decayed.

If rust or purple spot appears in the garden remove and destroy all fronds after the first hard frost in the fall. Plant new asparagus plants far enough apart so that there is room for good air circulation around mature plants.