

Growing Asparagus in Wisconsin

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Asparagus (*Asparagus officinalis*) is a member of the lily family (Liliaceae). It is a hardy perennial that will yield for up to 40 years or more once the crop is established. The fern-like foliage grows to about 4-5 feet tall if the young stems are not cut. The plants are dioecious meaning that male and female flowers are borne on separate plants. The female plants will produce spears like the male plants but they will also produce flowers once the plants are allowed to produce ferns, thereby putting energy into the production of berries that arise from the female flowers and taking energy away from rejuvenating the crowns. The production of seed also leads to seedling weeds growing in the asparagus bed which will crowd the desirable crowns and reduce their vigor as the seedlings will compete for water, nutrients, and space. This has led, in recent years to the production of all male varieties of the crop. These all male varieties are much more vigorous than the older, open pollinated varieties such as Mary Washington or Martha Washington.

Asparagus is thought to have originated near the Mediterranean Sea and was a Greek delicacy. Its culture dates back to about 200 B.C. In Greek, the word asparagus means “stalk” or “shoot”. Asparagus has been grown in America since the early settlers came from Europe but it was not until the mid-1800s that it was planted extensively.

Cultivars:

There are both open pollinated hybrids and predominantly male hybrids. Male plants yield more than females so I'd encourage you to consider planting one of them. Some cultivars will have resistance to *Cercospora* leaf spot, crown rot, *Fusarium* wilt, and rust. Jersey Giant, Jersey Knight, Jersey Supreme, Jersey Gem, and Jersey King are all male varieties that yield more than Mary or Martha Washington. This yield increase can be 1 ½ - 2 times that of traditional cultivars. These all-male varieties are available from the Jersey Asparagus Company (www.jerseyasparagus.com).

- Jersey Knight is probably the best for the home gardener and has the best spear quality.
- Jersey Giant is also a popular home garden variety. It is more tolerant of the cold Wisconsin climate than Jersey Knight.
- Jersey Supreme is a relatively new variety that is also well suited to colder climates and will produce spears earlier in the season.

Another unique variety is Purple Passion, a purple variety of asparagus for the gardener looking for a unique crop. Purple Passion was a new variety in 2004. It produces a purple spear and has a high sugar content. Purple passion will turn

green when cooked. Keep in mind that this is not an all male variety like the 3 varieties previously listed.

Culture:

Select a site, preferably in full sun, where the plants can remain for years. Deep, well-drained soils are essential to good asparagus production.

The soil should have at least 2% organic matter and high levels of phosphorus and potassium before planting. Soil pH should be 6.5-7.5 for best production. Get a soil test prior to planting and indicate on the form that you are planning on planting asparagus so recommendations can be made accordingly.

Use transplants of 1-year-old crowns from a reputable dealer that are certified disease-free. The crowns should be planted in early to mid-spring, depending on your area. Dig trenches 8 inches deep loosening the soil below and adding compost to the bottom of the trench. Rows should be 4-6 feet apart and the plants should be 9-12 inches apart in the row. Place the plants in the trench and spread out the roots. Cover with 2 inches of soil. Gradually fill in the trench as the spears begin to emerge. Poor stands result if the plants are covered too deeply at the beginning. Ridge the soil moderately over the rows after the plants are well established.

Asparagus plants grow outward from the central crown by fleshy roots called rhizomes. After 10-15 years the crown and resulting rhizome radius can reach 2 feet or more in diameter.

After the 8 week harvest period – late June in southern Wisconsin, fertilize with a complete fertilizer such as 10-10-10 to help rejuvenate the crowns that have been depleted of nutrients during the harvest season. In the fall after the ferns have yellowed, cut the foliage back to prevent overwintering of the asparagus beetles and rust in the crop.

Harvest:

Do not harvest the plants until they are well established – generally when they are 3 years old. Snap or cut spears when they are 8-10 inches tall but before the tips begin to open. Because asparagus crowns must have a rest period to rejuvenate before the next crop, stop harvesting when the emerging spears are about the diameter of a pencil or your little finger.

A unique European production practice used by some market growers is to grow white asparagus called spargel in Germany. This method includes the exclusion of light when the spears are emerging. The absence of light inhibits photosynthesis and thereby the production of chlorophyll which produces the green color. Using inverted 5 gallon buckets work well in small plantings. The white spears are more tender and have a milder flavor than the traditional green spears. Keep in mind that by eliminating the production of chlorophyll, white asparagus will not have the nutritive value found in its green counterpart.

Pest Problems:

Weeds are a problem in asparagus production. The primary weed problems are perennial weeds because this is a perennial crop. Avoid planting asparagus in beds infested with perennial weeds such as Canada thistle, quackgrass, and field bindweed or eliminate these weeds before planting. If you are plagued with perennial weeds in existing plantings, you can try using Round-up early in the spring before the spears emerge or in the fall after you've cut back the ferns. Mulching heavily with organic mulch will prevent the germination of annual weed seeds. If you plan to use compost as your source of mulch because it will also add nutrients to the soil, make sure the compost you use has been "hot composted" to kill any weed or crop seeds that may be present.

Other pest problems include *Fusarium* wilt which will require you to move the bed to rejuvenate it and prevent future problems. *Fusarium* is a soil-borne fungus that can live in the soil almost indefinitely. It also infects many weed species which can serve as an alternate host to the disease. It will weaken the crowns thereby producing smaller spears.

Rust is another disease that plagues asparagus. The ferns of rust-infected plants will defoliate prematurely or die back altogether so it's best to plant rust resistant varieties. In addition to causing fern dieback, rust can also weaken the plant and predispose it to *Fusarium* if this fungus is present in the soil. Rust can be identified by small, yellow or orange spots that first appear on the tips of the plants. Later in the season, dusty brick-red pustules appear on both the shoots and the ferns. Rust is most severe in years with heavy rains or high humidity. The incidence of rust can be reduced by cutting back the ferns in the fall and burning them so the rust cannot complete its life cycle.

Asparagus beetles are an annual insect pest of asparagus. The twelve spotted asparagus beetle is more common in Wisconsin than the common asparagus beetle. Injury first appears early in the spring on the emerging shoots. The insects feed on the shoots as they develop, causing them to bend in the direction in which the feeding damage occurs. Once the plant begins to fern, the beetle populations can increase to numbers that can totally defoliate plants if left unchecked. Common insecticides used to control asparagus beetles include Sevin, Dursban and Rotenone.