

### ASPARAGUS (*Asparagus officinalis*)

**You have received hardy, 1-year-old asparagus crowns. Open the box immediately upon receipt and plant the crowns as soon as possible. If you unable to plant them immediately, remove any elastics or ties and gently loosen the crowns, cover them with damp sphagnum moss or newspaper, and store them in a cool location out of direct sunlight (such as a refrigerator). Do not expose the crowns to the drying sun or wind.**

Asparagus is a long-lived perennial plant that has been cultivated for thousands of years. The young spears, before they turn woody, are the only portions of asparagus that are edible. Any small, red berries that develop on the foliage later in the season should be avoided, as they are poisonous to humans. A properly selected and planted site will produce for 15–20 years or more!

#### SITE AND SOIL PREPARATION

Establishment practices are very important for successful asparagus production. Errors made at planting are not easily corrected after planting and can reduce yields.\*

Asparagus prefers a sunny location free of perennial weeds. While it may seem logical to position a perennial planting “out-of-the-way,” locating an asparagus bed at the edge of a field or garden location can allow aggressive perennial grasses and other weeds to creep in very easily.

Nor will asparagus survive in poorly drained soils or fields with standing water. Sandy loam soils are preferable for commercial production.

A soil test to indicate pH and nutrient levels should be taken the fall prior to planting the bed. In early spring, prior to planting, apply compost, aged manure, or complete fertilizer, and work well into the soil to a depth of 12". Asparagus will not perform well in acidic soils. Add lime if necessary to raise the soil pH to 7.0.

#### PLANTING

Crowns can be planted out 3–4 weeks prior to the average last frost date — which is usually when they are freshly available from the asparagus

nurseries. They can, however, be planted as late as the middle of summer, when the frost-free days are actually more desirable for establishment.

Cut a few of the fleshy roots to inspect their quality. If the interior flesh is bright white it is healthy; brown discoloration could represent fusarium infection, in which case you would not want to plant that crown. If the crowns seem juicy and fresh they are ready for planting, but if they seem a little dehydrated, soak them in water for a few hours or overnight before planting them.

Prepare a furrow 5–8" deep and 12" wide. Depth of planting is critical: if planted too shallow, asparagus will produce a large number of small spears; if planted too deep, the spears will be large but few in number. Shallower planting may be beneficial in heavier soils to prevent the crowns from becoming waterlogged, while a deeper planting can be made in sandy soils. Before planting crowns, adding organic matter to either end of the spectrum of soil types will be beneficial.

Place the crowns in the furrow. With the buds upright and the roots splayed apart as best as you can, space them 8–14" apart in the row, with 4–6' between rows. Certain varieties have other spacing requirements, however, so be sure to reference the specific variety descriptions provided in our catalog or on our website. Generally, wider in-row spacing will be beneficial for a stand that is expected to grow under more ideal conditions and/or to live for a longer time. A more closely planted patch under ideal conditions will be more productive per area sooner than a wider spaced planting, but will also over-crowd itself sooner and become less productive in the long term (provided disease, insects, and weeds are not contributing factors).



Crowns laid out in the planting trench, ready to be covered with an initial layer of soil.

Cover crowns with 2–3" of soil at planting, and water until the soil in the bed is evenly damp.

As the shoots appear above the soil line, gradually back-fill the furrow, ensuring that the tips of the shoots are not completely covered. Progressively fill the trench every couple of weeks by back-filling, 3–4 times during the first year (see photo below).



Back-filling the planting trench.

Asparagus beds require consistent soil moisture during their first season after planting. Water stress can delay establishment or result in crown death.

## PERENNIAL MAINTENANCE

**Weed Management.** Be sure to keep the asparagus bed weed-free, especially of grasses and other aggressive perennial weeds. A mulch of hay, straw, leaves, or clean compost should be applied after the planting trench has been completely back-filled, to regulate moisture, suppress weeds, and add organic matter to the beds. Shallow tillage ( $\frac{1}{2}$ –1" deep) in early spring or after harvest will help to control any overwintering weeds. Plastic weed fabric can be applied between rows if hand tools are used to manage the plantings. An annually cultivated strip around the asparagus patch can be effective in preventing weed incursion over time.

Be sure to use caution when cultivating, as damage to the crowns can provide an entry point to soilborne disease.

**Fertility.** Asparagus is a heavy feeder and should be fertilized regularly to maintain productivity, and water should be applied during dry periods all season long. Each fall or early spring after establishment, add compost or aged manure to the beds.

**pH.** Soil testing is recommended every 2–3 years to monitor the pH so it can be maintained at 7.0.

## PEST & DISEASE MANAGEMENT

Asparagus is susceptible not only to perennial weeds, but to several insects, chiefly asparagus beetle, Japanese beetle, cutworms, and aphids, and fungi, including purple blotch, *Fusarium* wilt, and rust.

Much pest and disease pressure can be controlled with good sanitation and cultural practices.

Scout for insect pests regularly. If populations increase to damaging levels, pyrethrin or spinosad can be used to control asparagus beetles, aphids, and cutworms. Asparagus beetles overwinter in crop debris within the bed and surrounding areas. Removal of this debris will help to reduce populations. Wait until the foliage senesces (naturally deteriorates) in the fall prior to trimming it to ground level.

Purple blotch is a fungus that can cause a significant amount of damage to the foliage, especially later in the season and as the disease builds up over time. Foliar disease control (as needed) can make big differences on your yield potential in the following season.

## HARVEST

A year after planting, you can harvest from your asparagus bed for a 7–10 day period in the spring. Two years after planting the bed, you can harvest for 2–3 weeks. In the third and subsequent years, a harvest duration of 6–8 weeks is normally possible under favorable conditions.

Spears are considered marketable when they reach 6–9" in length with a pencil-size diameter or larger. Harvest by bending the tender shoots over until they snap, or cut with a knife at or just below soil

level to keep stubble to a minimum and reduce exposure of cut surfaces to infection. If using a harvest knife, do so with care to avoid damaging developing spears that are just below the soil surface. Harvest all spears, including damaged, thin, and spindly ones. (Allowing cull spears to fern out during harvest will delay spear production, and offer insect pests host sites to build up populations.) Harvest every day or even twice a day during warm weather and depending on the spear size requirements of your market; under milder temperatures harvest can occur less frequently.

Store at 36–40°F (2.2–4.4°C) at 95–100% relative humidity for up to 2 weeks for commercial sales. Stack spears upright in containers or buckets with a small amount of bottom water. If laid on their sides the spears can develop a curved shape over time in storage. If exposed to temperatures below 35°F they can develop cold damage and soft rots. If exposed to warmer temperatures than 40°F they can continue to grow/mature and become tougher and less flavorful.

01.24.2023 | PZ, Id, ms

\* As Michigan State Extension specialist Hugh Price once observed, *“There is not much you can do to hurt a good asparagus planting, and there is not much you can do to help a poor one.”* URL: <https://extension.umaine.edu/publications/2071e/#harvest> (accessed 01.24.2023).

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