



## **BEFORE YOU START**

Asparagus requires sweet soil—be sure that the soil pH is between 6.8 and 7.5.

Avoid placing new asparagus plants in fields that have previously grown asparagus. Asparagus is highly susceptible to Fusarium root rot, a disease caused by the Fusarium fungus. This fungus can survive up to seven (7) years in infected soil, and soil fumigation is not effective in reducing long-term soil populations. Further, asparagus plants are a self-allelopathic species, releasing toxic chemicals that inhibit and suppress the growth of young asparagus crowns. We emphasize the importance of crop rotation before replanting asparagus in the same field. Do not plant where corn has grown within at least 3 years.

Prepare the field one (1) year in advance, beginning with the eradication of all perennial weeds. And having your Agricultural Extension Service perform a crop-specific soil test eight to ten (8-12) months before your planned planting date. Early identification of precisely what nutrients or amendments are needed, and how much, allows optimized application. Some amendments require time to take effect, and some are less effective when applied to the soil surface. Phosphorus must be added in the bottom of the trench; topdressing is less effective.

Choose a permanent location in full sun with well-draining soil. Asparagus does not like to be moved. Do not soak roots before planting.

Do not mix compost with the soil until plants are growing. Use compost as an amendment, mixing it thoroughly with soil, as you backfill your trench.

Asparagus plantings have a longer lifespan in areas with deep, well-draining soil and long, cold, winters.



# *How to Grow* **ASPARAGUS**

*From your friends at*  
**NOURSE FARMS**

## **SPACING**

- Twelve to fourteen inches (12-14") between plants for Millennium and Mary Washington.
- Six to eight inches (6-8") between plants is recommended for Purple Passion.
- Five feet (5') between rows.
- Furrows should be eight to ten inches (8-10") deep for most soils.
- Furrows of six to eight inches (6-8") are recommended for heavier clay-like soils.

## **PLANTING**

Well-maintained asparagus plants can be productive for 15 years or more. The prolific root system may reach over six (6) feet deep at maturity. Avoid soil with a high water table, as asparagus plants do not tolerate standing water around their roots. We recommend planting in soil without stone and gravel, as they can injure emerging stems and make them unmarketable.

It is best if you prepare the site a year in advance. Have a test done to ensure the soil is within the correct pH range and contains high levels of phosphorus. You may need to apply lime to adjust the pH. If the phosphorus level is low, we recommend adding bone meal (½ pound per 10-foot row) or superphosphate into the trench at planting. Spread phosphorus and lime thoroughly at the bottom of the eight to ten-inch (6-8") deep planting furrow. Top-dressing with phosphorus lime is not effective.

Without a pretesting of the soil, in the early spring, at least two to three (2-3) weeks before planting, incorporate five pounds of 10-10-10 per 100 square feet. If you have not fertilized two to three (2-3) weeks before planting, side-dress four to six (4-6) weeks later when the plants are growing well.

For heavier, clay-like soil, furrows six (6) inches deep are recommended. Planting crowns too shallowly encourages early spear emergence, a higher probability of frost injury, and a greater likelihood of winter kill of crowns.

Lay roots along the bottom of the furrow and cover entirely with two to three inches (2-3") of soil. Plant roots horizontally, parallel to the bottom of the trench and the soil surface, not vertically like strawberry plants. There is no need to create small mounds in the trench or spread the roots.



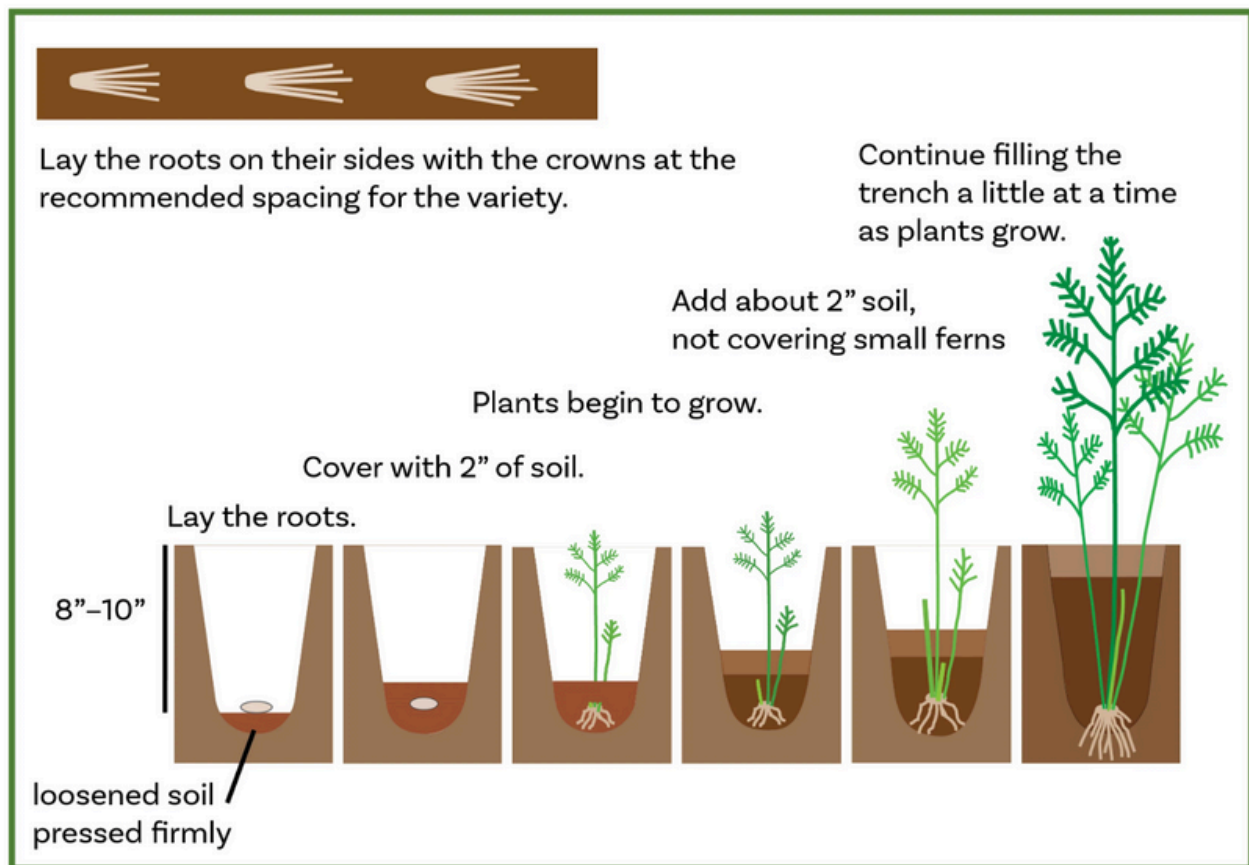
# How to Grow ASPARAGUS



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As the spears grow and expand into ferns, they gradually fill the trench with soil. You may mix up to 50% well-aged compost into the soil or add one pound of 10-10-10 or an equivalent balanced fertilizer as you fill in the trench. Within six weeks, the furrow should be completely filled. Using this method helps to limit weed development. You may wait until the ferns are growing above the trench and fill the trench at one time.

Research has shown that planting one-year-old crowns is more economical and higher yielding than two-year-old crowns, and that two-year-old crowns tend to suffer greater transplant shock.





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## **IRRIGATION**

Asparagus plants need a well-drained site to thrive. We recommend using drip irrigation to help ensure large and consistent crops year after year. Drip irrigation is more efficient and keeps plants dry, making it healthier for the crop. Lighter soil may require more frequent watering than heavier soil, as lighter soil retains moisture less effectively. It is vital to maintain adequate soil moisture levels, especially after planting new crowns to encourage vigorous root development and fern growth. If the soil is dry during spear growth, quality and yield are negatively impacted. During fern growth, asparagus plants may use about .20 inches of soil water per day, depending on soil and weather conditions. The following year's spring spear production significantly reduces when soil moisture levels are inadequate during fern development.

## **FERTILIZATION**

### *Establishment Year*

Fertilizing decisions should be made based on crop-specific soil testing!

Do not add compost or fertilizer until plants are growing. After plants have started to grow, fertilize during the period the trench is being filled. You may mix up to fifty percent (50%) well-aged compost into the soil or add one pound of 10-10-10 or equivalent balanced fertilizer into the soil as you fill the trench. Side-dress in early August with one pound (1 lb.) of 10-10-10 fertilizer per 100 square feet (or equivalent) and lightly work into the top two inches (2") of soil.

### *Succeeding Years*

Use two pounds (2 lbs.) 10-10-10 per 100 square feet in early spring and again following harvest. To maintain optimum soil condition, test your soil pH every three to four (3-4) years and amend as necessary. Broadcast lime, bone meal, and superphosphate according to soil test results and recommendations. Maintaining a pH of 7.2 or higher.

Approximately 50 lbs. of nitrogen per acre can be applied in the early spring before spear emergence. About 8-10 weeks later, apply about 40-60 lbs. of nitrogen (depending on maturity of the planting, soil texture, leaching conditions, and relative plant productivity year to year).



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## **WEED CONTROL/MULCHING**

During the harvest period, manually pull weeds to prevent injury to emerging spears. Ferns will die back naturally in the fall. Mulch the dried ferns with a mower in the spring to reduce weed pressure if no disease was present during the season.

Check with the local extension before using chemical products for weed control. If tilling the soil during the rest of the growing season, only till ½ to 1 inch of the soil surface. Deep tilling can damage your crowns and bring weed seeds up to the surface.

Do not use salt to control weeds.

## **BED MAINTENANCE**

Control weeds throughout the growing season and irrigate as needed. Look out for asparagus beetles and their larvae, Japanese beetles, aphids, cutworms, and the asparagus miner. These insects can cause serious damage to an established bed.

To prevent disease, ensure your plantings have proper air circulation and water drainage. Producing a good crop of ferns is crucial for ensuring a large yield of spears next spring. In the fall, asparagus ferns will start to change color as they begin to enter dormancy. Be careful not to take this as a sign that it is time to cut your ferns! Cutting your asparagus ferns too early can jeopardize your next year's crop.

As asparagus plants prepare for winter and go into dormancy, they send sugars from the ferns down to the roots to store as energy for next year's harvest. This process will not be completed until the plants are fully dormant and the stems are entirely yellow or brown. We recommend waiting until several hard frosts, or better yet, until early spring to cut your ferns. The stems often catch snow, which helps insulate the plant during the winter months.

When the stems are entirely yellow or brown, and when you are ready to mow your ferns, we recommend using a rotary mower. By using a rotary mower, dead stems can be cut and used as a weed control measure. Additionally, as the dead stem tissue breaks down, it will add organic matter to the soil. Only use "clean" ferns. Do not use ferns that pests or diseases may have impacted.



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## **HARVESTING SPEARS**

The length of time for harvesting spears each year gradually increases until the asparagus plant reaches full maturity at five years. The priority in the first three years is to encourage fern growth and build substantial storage root systems. We recommend using an asparagus knife to cut the spears, as it minimizes water loss and preserves spear quality.

You can begin to harvest asparagus the year after planting. Cut or snap all five to eight-inch spears that appear for a period of seven to ten days. Ensure that you cut or snap stalks at the soil surface or just below the soil line, not leaving stubs. A stub can be an entry point for pests and diseases. In the second season, you can harvest all the new spears that appear for a period of three to four (3–4) weeks. By the third year, you can harvest for the entire season, which is usually six to eight (6–8) weeks long. When spears begin to get spindly, or about the size of a pencil, stop harvesting for the season and allow all new spears to develop into ferns to feed the crown.

## **TIPS**

- If frosted, the tips become brown. Remove the spear immediately to prevent further setback of the planting.
- During harvest, asparagus roots need about two to three inches (2–3") of water per week. Do not let the soil dry out too much.
- Be careful not to damage pre-emergent spears when cutting below the soil surface during harvest.
- It is best to incorporate bone meal or superphosphate into the soil at the bottom of the planting trench; topdressing several inches above the roots is not highly effective.