Asparagus Production in Home Vegetable Garden in New Mexico

Cooperative Extension Service
College of Agriculture and Home Economics

Guide H-244

George W. Dickerson, Extension Horticulture Specialist

This publication is scheduled to be updated and reissued 9/04.

Asparagus (*Asparagus officinalis)* is one of the earliest, most winter hardy, salt-tolerant vegetables that can be grown in the home garden. A perennial crop, it can remain productive in the home garden for 10 to 15 years. Careful selection of the asparagus bed site before planting is important. A 30- to 50-foot row of asparagus is sufficient for a family of five. Asparagus is a good source of vitamins A and C.

The asparagus plant consists of roots, a crown, and spears, and/or ferns. Roots can be fleshy (providing food storage for the plant) or fibrous and are attached to the crown (a series of rhizomes or underground root-like stems). Buds that develop in the crown form spears and, if left unharvested, eventually form ferns. Older varieties of asparagus (such as 'Mary Washington' and 'Martha Washington') produce both male and female plants (50:50 ratio). Many newer varieties ('Jersey Giant', 'Jersey Knight') are all-male hybrids that produce greater yields because they don't waste energy producing seed.

OPTIMUM GROWING CONDITIONS

Spear initiation and root growth begin when soil temperatures reach 50°F. Optimum production occurs at ambient air temperatures of 75 to 85°F during the day and 55 to 66°F at night. Full sun and a long growing season will result in optimum productivity.

Asparagus will tolerate most soils and some salinity, but they produce best in deep, well-drained, sandy loam soils with a pH of 6.8 to 7.5. Avoid sites with perennial weeds like bindweed.

Planting and Establishment

Before planting, apply 1/2 pound of P_2O_5 (approximately 1 pound of superphosphate fertilizer, or 0-46-0) and 1/4 pound of nitrogen (approximately 1/2 pound of urea, or 46-0-0) per 100 square feet to the planting site. Incorporate both fertilizers to a depth of 4 to 6 inches with a rototiller. An alternative is to apply a complete fertilizer (4.5 lb/100 square feet of 5-10-10 fertilizer). Make planting furrows 1 foot deep and 4 to 5 feet apart. Backfill the furrows with compost and the soil/fertilizer mixture until the furrows are 6 inches deep.

During the spring, plant dormant, one-year-old crowns 12 to 18 inches apart within the row with the buds facing up. Do not allow crowns to dry out. Cover with a couple of inches of compost and soil, then irrigate. As spears emerge, allow them to develop into ferns. Do not harvest the first year. Not harvesting allows the ferns to develop, which in turn builds up a store of carbohydrates in the roots to support good spear production the following spring.

Ferns can reach a height of 5 to 6 feet. Gradually fill the furrows with soil and compost as the ferns develop (being careful not to cover the foliage with soil) until beds are formed with furrows or paths on both sides. The tops of the crowns should be no more than 6 inches below the surface. In July, apply a sidedressing of nitrogen fertilizer (1/4 to 1/2 pound of urea/20 feet of row), incorporate the fertilizer into the sides of the beds, then irrigate.

Early in the spring the following year, remove the old ferns and sidedress with a complete fertilizer (2 lb/100 square feet of 5-10-10) by incorporating into the side of the bed and around the plants; irrigate. A second application of nitrogen fertilizer (urea) can be applied after harvest. Repeat each year. Keep the beds weeded throughout the growing season. Keep the plant's root system reasonably moist the first summer for good root development.

HARVESTING

If spear production is strong during the spring of the second season, plants can be lightly harvested by

snapping off or cutting spears near ground level. Harvest when the spears are 6 to 8 inches long with tight buds. Cease harvesting when the average diameter of the spears is less than 1/4 inch. Fertilize and allow ferns to develop so that carbohydrates can be restored in the roots. Immediately refrigerate harvested spears.

Full harvesting can begin during the third growing season. Harvesting will generally last from 4 to 8 weeks depending on the length of the growing season and the maturity of the plants.

VARIETIES

'Mary Washington' and 'Martha Washington' have been the varieties of choice for the backyard garden. But the new all-male hybrids like 'Jersey Giant', 'Jersey Knight', and 'Jersey King' will out-yield them and generally exhibit greater disease resistance. As no seed are produced, unwanted seedling asparagus plants will not become a weed problem. Crowns can be purchased from most local nurseries or mail order seed catalogs.

PESTS

Common insect pests of New Mexico asparagus include *asparagus beetles*, *cutworms*, and *asparagus aphids* (which can be identified by their powdery gray-green color). Using appropriate insecticides and good sanitation (such as removing old ferns in early spring) should control most of these pests.

Common diseases include *Fusarium wilt*, which causes spears to shrivel and roots to hollow and turn a reddish brown; *asparagus rust*, which causes raised orange lesions on ferns; and *Cercospora needle blight*, which causes ferns to die prematurely and creates on the ferns lesions that are small, tan to gray oval spots with reddish-brown margins. For Fusarium wilt and rust, plant resistant or tolerant varieties. For Cercospora needle blight, use an appropriate preventative fungicide.