



EXTENSION

Oklahoma Garden Planning Guide

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David Hillock

Extension Consumer Horticulturist

Brenda Sanders

Horticulture Extension Assistant

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Well-planned, properly managed home gardens can furnish Oklahoma families with flavorful, high quality, fresh vegetables from spring through fall, as well as for processing or storing for winter.

The amount of money invested in seeds, fertilizer, pesticides and a few tools is more than offset by the enjoyment, healthful outdoor exercise, and fresh homegrown flavor.

Choosing the Site

The selection and preparation of the garden site is an important key to growing a home garden successfully. An area exposed to full or near full sunlight with deep, well-drained, fertile soil is ideal. The site also should be located near a water supply and, if possible, away from trees and shrubs that would compete with the garden for light, water and nutrients.

While these conditions are ideal, many urban gardeners have a small area with a less-than-optimal site on which to grow vegetables. Yet, it is still possible to grow a vegetable garden by modifying certain cultural practices and types of crops grown. Areas with light shade can be used, such as those under young trees, under mature trees with high lacy canopies or in bright, airy places which receive only one to two hours of direct sun per day. There are several vegetables which will grow under these conditions, including beans, beets, broccoli, cabbage, cauliflower, chard, kohlrabi, leaf lettuce, peas, potatoes, radishes, rhubarb, spinach and turnips. Size and form of harvestable plant parts will be reduced depending on amount of light reaching plants. Fruiting vegetables may benefit from afternoon shade during hot periods in the summer.

If the site is poorly drained or the topsoil layer is thin or has too much sand or clay, raised beds or container gardening may be a better alternative. With a raised bed garden, a good-quality garden soil should be used and non-soil growing media are used in container gardens.

Planning the Garden

The chart on page 2 should be of help in determining family requirements of the different vegetables.

Perennial vegetables (asparagus, rhubarb, winter onions, etc.) should be planted at one side or end of the garden for efficient operation. The hardy vegetables planted early in the

season should be planted together, so they may be followed with late-season plantings of the same or other vegetables. Vegetables requiring similar cultural practices should be grouped together for ease of care.

The recommended spacings are based on best practices in the traditional row method of gardening. Smaller spacings can be used in alternative gardening methods such as container or square-foot gardening. In these situations, compact varieties of plants such as tomato and eggplant are a good choice.

The chart groups vegetables as cool season or warm season crops, indicating under which conditions they grow best. Crops classed as cool season may be planted earlier in the season and do best under cool conditions (average daily temperatures of 70 F or less), while those grouped as warm season crops grow better during warm temperatures (average daily temperatures ranging between 70 F to 90 F).

Based on the temperature the plants will withstand, vegetables are hardy, semi-hardy, tender or very tender. Hardy types may be planted before last frosts or freezes in the spring and are tolerant of cold weather in late autumn. The semi-hardy ones will be injured by a hard frost, but will grow in cool weather and not be harmed by a light frost. Tender plants are injured or may be killed by a light frost but can withstand cool weather, while the very tender are injured by cool weather.

Differences in suggested planting dates range from the earliest for southeast Oklahoma to the latest for the northwest part of the state. Planting dates also may vary when season extension techniques are used.

Gardening Tips

In order to have a successful garden, the gardener must follow a few guidelines. The following tips may help to prevent some common garden problems from occurring, or help overcome those that do arise:

- Sample soil and have it tested every three to four years.
- Apply fertilizers in the recommended manner and amount.
- Add organic materials such as yard waste compost or composted manure to improve soil organic matter.
- Use recommended varieties.
- Thin plants when small.
- Use mulches to conserve moisture, control weeds and

Garden Planning Guide

Vegetable	Time to Plant*	Feet of Row Per Person	Days to Harvest	Method of Planting	Spacing Between Rows	Spacing Within Rows	Depth to Cover Seed	Quantity Needed Per Person	Frost Tolerance
Cool Season									
Asparagus	Fall or Spring	10 to 20	—	Crowns	4 ft.	2 ft.	6 in.	3 to 5	Hardy
Beet	March	10 to 20	50 to 70	Seed	1 1/2 ft.	4 in.	1 in.	1/8 oz.	Semi-Hardy
Broccoli	March	10	80 to 90	Plants	3 ft.	1 1/2 ft.		6 to 7 plants	Hardy
Cabbage	Feb. 15 to March 10	10 to 20	60 to 90	Plants	3 ft.	1 to 1 1/2 ft.		6 to 15 plants	Hardy
Carrot	Feb. 15 to March 10	20	70 to 90	Seed	1 1/2 ft.	3 in.	1/2 in.	1/8 oz.	Semi-Hardy
Cauliflower	Feb. 15 to March 10	15	70 to 90	Plants	3 ft.	1 1/2 ft.		6 to 8 plants	Semi-Hardy
Chard, Swiss	Feb. 15 to March 10	10	40 to 60	Seed	1 1/2 ft.	3 in.	1/2 in.	1/2 oz.	Semi-Tender
Kohlrabi	Feb. 15 to March 10	10	50 to 70	Seed	2 ft.	6 in.	1/2 in.	1/8 oz.	Hardy
Lettuce, Head	Feb. 15 to March 10	20	60 to 90	Seed or Plant	1 to 1 1/2 ft.	1 ft.	1/4 in.	1/8 oz. or 20 plants	Semi-Hardy
Lettuce, Leaf	Feb. 15 to March 10	20	40 to 70	Seed or Plant	1 to 1 1/2 ft.	3 in.	1/4 in.	1/8 oz or 40 plants	Semi-Hardy
Onion	Feb. 15 to March 10	25	60 to 120	Sets	1 to 1 1/2 ft.	4 in.	1 in.	1/4 qt. sets	Hardy
Onion	Feb. 15 to March 10	25	60 to 120	Plants	1 to 1 1/2 ft.	4 in.	1 in.	1/8 oz. or 75 plants	Hardy
Peas, Green	Feb. 15 to March 10	30	60 to 90	Seed	3 ft.	2 in.	2 in.	1/4 lb.	Hardy
Potato, Irish	Feb. 15 to March 10	50	90 to 120	Tuber pieces 2-3 oz.	3 ft.	1 ft.	4 in.	6 to 8 lbs.	Semi-Hardy
Radish	March 1 to April 15	15	25 to 40	Seed	1 ft.	2 in.	1/2 in.	1/8 oz.	Hardy
Rhubarb	Fall or Spring	12	—	Crowns	4 ft.	2 ft.	3 in.	3 to 4 crowns	Hardy
Spinach	Feb. 15 to March 10	35	50 to 70	Seed	1 1/2 ft.	2 in.	1/2 in.	1/4 oz.	Hardy
Turnip	Feb. 15 to March 10	20	50 to 60	Seed	1 1/2 ft.	3 in.	1/2 in.	1/8 oz.	Hardy
Warm Season									
Bean, Lima	April 15-30	20	90 to 120	Seed	2-3 ft.	6 in.	1 in.	1/8 lb.	Tender
Beans, Green or Wax	April 10-30	40	50 to 60	Seed	1 1/2 ft.	4 in.	1 in.	1/8 lb.	Tender
Beans, Pole	April 10-30	20	60 to 90	Seed	3 ft.	8 to 12 in.	1 in.	1/8 lb.	Tender
Cantaloupe	May 1-20	20	80 to 100	Seed or Plants	3 to 5 ft.	2 to 3 ft.	1/2 in.	1/8 oz.	Very Tender
Cucumber	April 10-30 or later	5 to 10	50 to 70	Seed or Plants	3 to 5 ft.	2 to 3 ft.	1/2 in.	1/8 oz.	Very Tender
Eggplant	April 10-30	5 to 10	80 to 90	Plants	3 ft.	1 1/2 ft.		3 to 5 plants	Very Tender
Okra	April 10-30 or later	20	60 to 70	Seed	2 to 3 ft.	1 1/2 ft.	1 in.	1/4 oz.	Very Tender
Pepper	April 10-30 or later	10	90 to 110	Plants	3 ft.	2 ft.		5 plants	Tender
Pumpkin	April 10-30 or later	30	90 to 120	Seed	5 ft.	3 to 4 ft.	1 in.	1/8 oz.	Tender
Southern Pea	May 1- June 10	20	85 to 100	Seed	3 ft.	4 in.	1 in.	1/8 lb.	Tender
Squash, Summer	April 10-30 or later	10 to 20	40 to 60	Seed or Plants	4 ft.	3 ft.	1 in.	1/8 oz.	Very Tender
Squash, Winter	May 15-June 15	30	110 to 125	Seed or Plants	5 ft.	4 ft.	1 in.	1/8 oz.	Very Tender
Sweet Corn	Mar. 25-April 30	50	80 to 100	Seed	3 ft.	1 to 1 1/2 ft.	1 in.	1/8 lb.	Tender
Sweet Potato	May 1- June 10	25	100 to 120	Plants	3 ft.	1 ft.		25 plants	Very Tender
Tomato	April 10-30	10-20	70 to 90	Plants	4ft.	2 to 3 ft.		4 to 5 plants	Tender
Watermelon	May 1-20	10-20	90 to 120	Seed	5-8 ft.	5 to 8 ft.	1 in.	1/8 oz.	Very Tender

* These dates indicate planting times from southeast to northwest Oklahoma. Specific climate and weather may influence planting dates. For cool season vegetables, the soil temperature at the depth where the seeds are planted should be at least 40 F. Specific climate and weather may influence planting dates. For warm season vegetables, the soil temperature at the depth where the seeds are planted should be at least 50 F.

- reduce fruit rots.
- Avoid excessive walking and working in the garden when foliage and soil are wet.
- Examine the garden often to keep ahead of potential problems.
- Keep the garden free of weeds and diseases.
- Control only those insects in the garden that are known to be pests.
- Wash and clean tools and sprayers after use.
- Rotate specific crop family locations each year to avoid insect and disease buildup.
- When possible, harvest vegetables during the cool hours of the day.

Avoid the Following Mistakes:

- Planting too closely, which prevents walking or working in the garden, may favor diseases and interferes with normal plant development.
- Placing fertilizer directly in contact with plant roots, stems, or seeds.
- Cultivating deeply, resulting in injury to plant roots.
- Planting varieties not recommended for your area or the season; however, do try newly released varieties.
- Watering frequently or excessively so that the soil is always wet and soggy.

- Allowing weeds to grow large before elimination.
- Applying home remedies, fertilizers or pesticides in a haphazard manner, or without reading and following product instructions. (Remember, these materials are being applied to your family's food!)
- Using chemicals not specifically recommended for garden crops.
- Storing leftover diluted spray.

Other OSU Extension Gardening Publications

[BAE-1511 — Drip Irrigation Systems](#)

[HLA-6005 — Mulching Garden Soils](#)

[HLA-6007 — Improving Garden Soil Fertility](#)

[HLA-6009 — Fall Gardening](#)

[HLA-6012 — Growing Tomatoes in the Home Garden](#)

[HLA-6013 — Summer Care of the Home Vegetable Garden](#)

[HLA-6032 — Vegetable Varieties for Oklahoma](#)

[EPP-7313 — Home Vegetable Garden Insect Control](#)

[EPP-7625 — Common Diseases of Tomatoes, Part I: Diseases Caused by Fungi](#)

[EPP-7626 — Common Diseases of Tomatoes, Part II: Diseases Caused by Bacteria, Viruses, and Nematodes](#)

[EPP-7627 — Common Diseases of Tomatoes, Part III: Non-Infectious Diseases](#)

[EPP-7640 — Soil Solarization for Control of Soilborne Diseases](#)

[EPP-7646 — Diseases of Asparagus in Oklahoma](#)

[E-929 — Guide for Identification and Management of Diseases of Cucurbit Vegetable Crops](#)

Common Garden Problems

Symptoms	Possible Causes	Corrective Measures
Plants stunted in growth; yellow colored foliage.	Improper soil fertility or soil pH	Use fertilizer and correct pH according to soil test. Use 2 to 3 pounds of complete fertilizer per 100 square feet in absence of soil test.
	Plants growing in compacted or poorly drained soil	Modify soil with organic matter, coarse sand. Provide surface drainage.
	Insect or disease damage; Root Knot Nematode	Use recommended control treatments.
	Iron deficiency	Apply iron to soil or foliage. Correct soil pH.
Plants stunted in growth; purplish colored leaf veins.	Low temperature	Plant at proper time. Do not use light-colored mulch too early in the season.
	Inadequate phosphorus	Apply phosphorus at soil test recommendation.
Holes in leaves; leaves yellowish and drooping or distorted in shape.	Insect infestation	Identify the insect pest and use recommended control measures.
Plant leaves with spots; dead, dried areas; or powdery or rusty areas.	Plant disease	Identify the cause of the symptoms to determine recommended control measures. Disease resistant varieties may be needed.
Plants wilt even though sufficient water is present.	Soluble salts too high	Have soil tested.
	Soil is too wet	Add organic matter; ridge soil for surface drainage. Plant in raised beds.
	Insect, disease, or nematode damage on roots	Use recommended varieties and recommended treatments of insecticides and fungicides and soil insecticides or nematicides.
Plants tall, spindly and unproductive.	Excessive shade	Relocate to sunny area. Keep down weeds.
	Excessive nitrogen	Reduce applications of nitrogen.
Blossom drop (tomatoes).	Hot winds, dry soil	Use mulch and water. Plant heat tolerant varieties.
	Low night temperatures	Avoid early planting.
	Overwatering or disease	Reduce watering, use recommended disease control treatments.
Tomato leaf roll (Leaf roll may not necessarily affect productivity)	Excess nitrogen and water	Withhold nitrogen, reduce watering.
	Beet curly top disease	Remove plant if diseased.
Downward cupping and curling of tomato leaves.	Damage from 2,4-D or similar herbicides	Don't spray on windy days or when temperature is above 80 F. Herbicides used at distant locations may affect tomatoes and other vegetables due to movement in air currents
Leathery, dry, brown blemish on the blossom end of tomatoes, peppers and watermelons.	Blossom end rot	Maintain uniform soil moisture and apply mulch. Avoid overwatering and excessive nitrogen. Select tolerant varieties. Protect young flowering plants from windy conditions.

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