Oklahoma Garden Planning Guide

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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 should also 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 or thin 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. Unfortunately, few vegetables will grow well under full, dense shade. If the site is not well drained or if the soil is thin, the use of raised beds can help with this problem.

Planning the Garden

The accompanying chart 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 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 thrive 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 to 90°F).

Based on the temperature that the plants will withstand, vegetables are hardy, semi-hardy, tender, or very tender. Hardy types may be planted before the last killing frost. 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.

Gardening Tips

In order to have a successful garden, the gardener must follow a few rules. 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.
- Make use of organic materials such as compost where available.
- Use recommended varieties.
- Thin plants when small.
- Use mulches to conserve moisture, control weeds, and 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, insects, and diseases.
- 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.
- Placing fertilizer directly in contact with plant roots or seeds.
- Cultivating deeply, resulting in injury to plant roots.
- Depending on varieties not recommended for your area; however, do try new releases.
- Watering frequently or excessively so that the soil is always wet and soggy.
- Allowing weeds to grow large before elimination.
- Applying chemicals or pesticides in a haphazard manner, without reading label directions or proper mixing.
- Using chemicals not specifically recommended for garden crops.
- Storing leftover diluted spray.

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	10-20	—	Crowns	4 ft.	2 ft.	6 in.	3-5	Hardy
Beet	March	10-20	50-70	Seed	1 1/2 ft.	4 in.	1 in.	1/8 oz.	Semi-Hardy
Broccoli	March	10	80-90	Plants	3 ft.	1 1/2 ft.		6-7 plants	Hardy
Cabbage	Feb. 15 to March 10	10-20	60-90	Plants	3 ft.	1-1 1/2 ft.		6-15 plants	Hardy
Carrot	Feb. 15 to March 10	20	70-90	Seed	1 1/2 ft.	3 in.	1/2 in.	1/8 oz.	Semi-Hardy
Cauliflower	Feb. 15 to March 10	15	70-90	Plants	3 ft.	1 1/2 ft.		6-8 plants	Semi-Hardy
Chard, Swiss	Feb. 15 to March 10	10	40-60	Seed	1 1/2 ft	3 in.	1/2 in.	1/2 oz.	Semi-Tender
Kohlrabi	Feb. 15 to March 10	10	50-70	Seed	2 ft.	6 in.	1/2 in.	1/8 oz.	Hardy
Lettuce, Head	Feb. 15 to March 10	20	60-90	Seed or Plant	1-1 1/2 ft.	1 ft.	1/4 in.	1/8 oz. or 20 plants	Semi Hardy
Lettuce, Leaf	Feb. 15 to March 10	20	40-70	Seed or Plant	1-1/ 2 ft.	3 in.	1/4 in.	1/8 oz or 40 plants	Semi-Hardy
Onion	Feb. 15 to March 10	25	60-120	Sets	1-1 1/2 ft.	4 in.	1 in.	1/4 qt. sets	Hardy
Onion	Feb. 15 to March 10	25	60-120	Plants	1-1 1/2 ft.	4 in.	1 in	1/8 oz. or 75 plants	Hardy
Peas, Green	Feb. 15 to March 10	30	60-90	Seed	3 ft.	2 in.	2 in.	1/4 lb.	Hardy
Potato, Irish	Feb. 15 to March 10	50	90-120	Tuber pieces 2-3 oz.	3 ft.	1 ft.	4 in.	6-8 lbs.	Semi-Hardy
Radish	March 1 to April 15	15	25-40	Seed	1 ft.	2 in.	1/2 in.	1/8 oz.	Hardy
Rhubarb	Fall or Spring	12	—	Crowns	4 ft.	2 ft.	3 in.	3-4 crowns	Hardy
Spinach	Feb. 15 to March 10	35	50-70	Seed	1 1/2 ft.	2 in.	1/2 in.	1/4 oz.	Hardy
Turnip	Feb. 15 to March 10	20	50-60	Seed	1 1/2 ft.	3 in.	1/2 in.	1/8 oz.	Hardy

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.

Warm Season

Bean, Lima	April 15-30	20	90-120	Seed	2-3 ft.	6 in.	1 in.	1/8 lb.	Tender
Beans, Green or Wax	April 10-30	40	50-60	Seed	1 1/2 ft.	4 in.	1 in.	1/8 lb.	Tender
Beans, Pole	April 10-30	20	60-90	Seed	3 ft.	8-12in.	1 in.	1/8 lb.	Tender
Cantaloupe	May 1-20	20	80-100	Seed or Plants	3-5 ft.	2-3 ft.	1/2 in.	1/8 oz.	Very Tender
Cucumber	April 10-30 or later	5-10	50-70	Seed or Plants	3-5 ft.	2-3 ft.	1/2 in.	1/8 oz.	Very Tender
Eggplant	April 10-30	5-10	80-90	Plants	3 ft.	1 1/2 ft.		3-5 plants	Very Tender
Okra	April 10-30 or later	20	60-70	Seed	2-3 ft.	1 1/2 ft.	1 in.	1/4 oz.	Tender
Pepper	April 10-30 or later	10	90-110	Plants	3 ft.	2 ft.		5 plants	Tender
Pumpkin	April 10-30 or later	30	90-120	Seed	5 ft.	3-4 ft.	1 in.	1/8 oz.	Tender
Southern Pea	May 1- June 10	20	85-100	Seed	3 ft.	4 in.	1 in.	1/8 lb.	Tender
Squash, Summer	April 10-30 or later	10-20	40-60	Seed or Plants	4 ft.	3 ft.	1 in.	1/8 oz.	Very Tender
Squash, Winter	May 15-June 15	30	110-125	Seed or Plants	5 ft.	4 ft.	1 in.	1/8 oz.	Very Tender
Sweet Corn	Mar. 25-April 30	50	80-100	Seed	3 ft.	1-1/2 ft.	1 in.	1/8 lb.	Tender
Sweet Potato	May 1- June 10	25	100-120	Plants	3 ft.	1 ft.		25 plants	Very Tender
Tomato	April 10-30	10-20	70-90	Plants	4ft.	2-3 ft.		4-5 plants	Tender
Watermelon	May 1-20	10-20	90-120	Seed	5-8 ft.	5-8 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 warm season vegetables, the soil temperature at the depth where the seeds are planted should be at least 50°F.

Other OSU Extension Gardening Publications

BAE-1511— Trickle Irrigation for Lawns, Gardens, and Small Orchards
HLA-6005— Mulching Vegetable 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
HLA-7313— Home Garden Insect Control
HLA-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: Diseases Not Caused by Pathogens
EPP-7635— Diseases of Cucurbits (Watermelons, Cucumbers, Cantaloupes, Squash, and Pumpkins)
EPP-7640— Solar Heating (Solarization) of Soil in Garden Plots for Control of Soil-Borne Plant Diseases
EPP-7646— Diseases of Asparagus in Oklahoma

Common Garden Problems

Symptoms	Possible Causes	Corrective Measures
Plants stunted in growth; yellow colored foliage.	Lack of soil fertility or soil pH abnormal	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, 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.	Damage by insects	Use recommended insecticide treatment.
Plant leaves with spots; dead, dried areas; or powdery or rusty areas.	Plant disease	Use resistant varieties, remove diseased plants when noticed and use recommended control treatments.
Plants wilt even though sufficient water is present.	Soluble salts too high	Have soil tested.
	Poor drainage and aeration	Add organic matter or sand; 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.	Excess nitrogen and water	Withhold nitrogen, reduce watering.
	Curly top disease of beets	Remove plant if diseased.
Downward cupping and curling of tomato leaves.	2,4-D damage	Don't spray on windy days or when temperature is above 80°F.
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.

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