

Home Gardening Series

Okra

Craig R. Andersen
Associate Professor and
Extension Specialist -
Vegetables

Environment

Light – sunny
Soil – well-drained
Fertility – medium
pH – 6.0 to 7.5
Temperature – warm
Moisture – average

Culture

Planting – seeds in warm soil
Spacing – 12 x 36-48 inches
Hardiness – tender annual
Fertilizer – medium

Okra – *Abelmoschus esculentus*

Okra is a tall-growing, warm-season annual that is well adapted to a wide range of soil types. Its actual origin is disputed to be either from South Asia or from western Africa and Ethiopia. It is a member of the mallow family, which also has hibiscus and cotton as members. Okra is called lady's fingers or gumbo in other areas of the world. No matter where it originated, it is grown throughout tropical Asia, Africa, the Caribbean and southern United States. Okra was mentioned by Thomas Jefferson and grown in the vegetable gardens at Monticello. An heirloom cultivar, 'Cow's Horn,' may be very similar to the ones he grew.



The immature pods can be used as a fried or boiled vegetable in soups and stews. Okra is processed as a frozen, pickled or canned product.

The hibiscus-like flowers and upright plants (4 to 6 feet in height) have ornamental value for backyard gardens. A close examination of the flowers reveals a similarity to cotton, a close relative.

Cultural Practices

Planting Time

In the spring, plant okra seeds after all danger of frost, when the soil has warmed to 62 degrees F and about 10 days after tomatoes are transplanted. This is April 10-15 in southern Arkansas, April 15-21 in central Arkansas and April 21-May 5 in northern Arkansas and at the higher elevations. Short day length, less than 11 hours, promotes flowering in most cultivars. Okra planted too late in the spring may remain

*Arkansas Is
Our Campus*

Visit our web site at:
<http://www.uaex.edu>

Cultivars -

Crop	Cultivar	Days to Maturity	Seed Per 100 Feet of Row	Remarks
Okra	Clemson Spineless	55	2 ounces	Bright green pods, high yields, good quality, 1939 AAS winner.
	Lee ^{AR}	58	2 ounces	Developed by Arkansas Agricultural Experiment Station.
	Emerald	55	2 ounces	Dark green color, round pods, larger pods remain tender.
	Jade ^{AR}	56	2 ounces	Early, tender, dark green pods, few branches.
	Cajun Delight	55	2 ounces	Vigorous plants give huge yields, produce earlier and longer, less fibrous, AAS winner.
	Jambalaya Hybrid	50	2 ounces	Dwarf plant, yields well, good for containers, very early.
	Annie Oakley II Hybrid	48	2 ounces	Spineless dwarf plants, tender to 4 1/2 inches, bright green pods.
	Red Burgundy	55	2 ounces	AAS winner, 4- to 5-foot plants with 6- to 8-inch red pods.
	Cow's Horn	55	2 ounces	Heirloom dating to the 1800s; 8 feet tall plants with pods up to 14 inches long. Best picked at about 6 inches.

Abbreviation: **AAS**: All-America Selections®

vegetative until late summer or early fall. The cultivar 'Clemson Spineless' is less sensitive to day length. Transplants of okra can be started four to six weeks prior to direct seeding in the garden. This will allow early and continued production.

Spacing and Depth of Planting

Okra has a thick seed coat and does not germinate easily. Soak seeds in water at room temperature overnight to improve germination. Discard nonviable seeds that float after soaking. Sow seeds 1 inch deep in rows that are 3 to 4 feet apart. When the seedlings are 3 inches high, thin to 10 to 18 inches apart.

Care

Okra grows well in any good garden soil. Prior to planting, apply one pound of a complete fertilizer, such as 10-20-10, per 100 square feet of row. Okra is quite sensitive to salt. Over-fertilization and poor drainage of soil or containers can damage the plants. Okra can become excessively vegetative if nitrogen levels are too high. Excess nitrogen fertilization results in poor yields and excessive vegetative growth. During a long growing season, apply additional fertilizer every four to six weeks. Use one pound of fertilizer per 100 square feet of row. Shallow cultivation near the plant keeps down weeds.

The flower on the okra plant blooms for only one day. Okra is generally self-pollinated, but it will be cross-pollinated by insects, such as bumblebees, when several varieties are grown in close proximity and blossom at the same time. For early harvests of okra, use black plastic mulch to warm the soil and plant transplants through the mulch when the soil is 60 degrees F or warmer.

Harvesting

Cut the pods while they are tender and free of fiber, 2 to 4 inches long for most varieties. Okra pods are ready for harvest four to seven days after the flower opens. Harvest pods every other day. Remove mature pods and discard, as they reduce the plant's production ability. The large pods rapidly become tough and woody. When the stem is too difficult to cut, the pod is too old to use. The plant bears until frost, and four or five plants will produce enough okra for most families.

Seed can be saved from open-pollinated varieties. Okra is self-pollinated, and flowers can be isolated by placing a paper bag over them for 24 hours while they are open. In early fall, allow several pods to mature and dry. The seed can be dried and stored for up to five years.

Common Problems

Insects

Aphids may attack young leaves and developing flowers and fruit and are often controlled by natural predators such as ladybugs. Sucking insects, such as stinkbugs and leaf-footed bugs, attack the pods and cause them to become misshaped. Use suggested insecticides to control these insects. Okra pods can be invaded by corn earworms, but this is not a major problem unless you plan to save seed. Fire ants may attack young pods causing damage at the base and loss of the pod. Japanese beetles can damage the leaves, leaving only skeletonized leaves, in a short period of time.

Diseases

Damping off of young seedlings is a problem early in the spring. It is caused by planting in soils that are too cold and using seeds that are not treated with a fungicide.

Southern blight is a soil-borne fungal disease that remains in the garden from one year to the next. It attacks the base of the plant and destroys the tissue. Remove any plants you suspect have this disease. Crop rotation is the most effective means of control.

The fungal vascular wilts caused by verticillium and fusarium are present in some soils. The best method of control for these diseases is crop rotation and disease-free seed.

Cultural

Remove old pods; this encourages plants to continue to produce.

Harvesting and Storage

days to maturity – 48 to 60 days

harvest – harvest pods every second day. Pods bruise easily, so care should be taken in harvesting.

approximate yields – 35 pounds per 50 row feet

amount to raise per person – 9 pounds

storage – 45 to 50 degrees F for 7 to 10 days. If refrigerated, enclose pods in plastic bag; keep dry or pods will darken and become slimy.

preservation – freeze

Frequently Asked Questions

Q. How often should okra be harvested, and how can you tell when it is ready?

A. Okra requires frequent harvesting. Harvest the pods before they become tough to get high-quality produce. Okra matures rapidly, especially in hot weather, and about four days are required from flowering to harvest maturity. Okra should be harvested every other day. Pod size varies with variety, but the length will generally be 4 to 6 inches. Test larger pods by cutting through them with a sharp knife. If it is difficult to cut through them, they are tough and unsuitable for serving. Remove old pods from the plant or it will stop producing.

Q. What causes yellowing, wilting and death of plants in midsummer?

A. These conditions are caused by either verticillium or fusarium wilt. Okra varieties are not resistant to verticillium and fusarium wilt. Rotate crops to prevent build-up of these diseases in your garden.

Q. Can seed from this year's okra crop be saved for next planting?

A. Yes. Okra is a self-pollinated crop, and seed can be saved from one year's garden for the next. To do so, allow some of the pods to remain on the plant and harvest them when they become fully mature and almost dry at the end of the season. Subsequent production is greatly curtailed when okra pods are allowed to remain on the plant. Okra seed remain viable for up to five years.

Q. Can okra plants be pruned during late summer or early fall for additional production until the first killing frost?

A. Yes, but the simple solution is a midsummer planting. When pruned, the plants develop a bush rather than a single stalk, which usually makes harvesting difficult.

Q. Small drops of liquid are oozing from various areas on the leaves and stems of my okra plants. What causes this?

A. The liquid is a natural secretion from the glands on the leaves and stems of the okra plant. The process is natural and causes no damage.

Q. What causes okra pods to be crooked and bent rather than straight?

A. This could be caused by certain sucking insects, such as stinkbugs and leaf-footed bugs, feeding on the pods. The insects inject chemicals into the pods causing the pods to stop or slow down growth in that area. The other side, which is growing normally, results in a curved or bent pod. The pods can still be eaten. No control is necessary unless the bugs are still feeding on the plants. Use a recommended insecticide for insect control and always follow the directions on the label.

Q. Is there anything special about the red-podded varieties of okra?

A. No. This selection produces red-colored okra. When cooked, the red disappears and the pods take on the normal green appearance.

Q. I have ants all over my okra. Do they hurt the plants?

A. Generally, ants do not hurt okra plants. Ants visit okra plants to get honeydew produced by sharpshooters, aphids or other sucking insects. Get rid of the sucking insects and the ants will leave. Fire ants have been known to damage okra flowers and young pods as they seek out the flower nectar.

Q. My okra did not grow properly last year. When I removed it at the end of the season, the roots were damaged by galls and swellings.

A. The damage was caused by root-knot nematodes. Rotate crops to control this problem, and use soil solarization to reduce problems for garden site.

Printed by University of Arkansas Cooperative Extension Service Printing Services.

DR. CRAIG R. ANDERSEN is associate professor and Extension specialist - vegetables, Horticulture Department, University of Arkansas Division of Agriculture, Fayetteville.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director, Cooperative Extension Service, University of Arkansas. The Arkansas Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, national origin, religion, gender, age, disability, marital or veteran status, or any other legally protected status and is an Affirmative Action/Equal Opportunity Employer.