

CROP PROFILE

SHISO

Perilla frutescens

Member of the Lamiaceae family



History

Shiso is native to the Himalayan region and China and was later introduced to Japan, where it became widely cultivated and culturally significant. In Japanese and East Asian traditions, shiso has long been used for culinary and medicinal purposes, valued for its anti-allergic, antibacterial, anti-inflammatory, antioxidant, and antiviral properties.

Climate Needs

Shiso thrives in warm conditions with full sun to partial shade. While drought-tolerant once established, plants perform best with consistent watering, averaging about 1 inch of water per week in the absence of rainfall. Shiso is not cold-hardy; prolonged exposure to temperatures below 45°F (7°C) will cause dieback or death. In colder climates, plants may be grown as annuals or overwintered indoors under bright light. Pinching back growing tips encourages bushier growth and higher leaf production.

Shiso Description

Shiso produces distinctive spade-shaped leaves approximately 3 inches wide with serrated edges. Leaf texture varies by variety, ranging from flat to deeply ruffled. Plants are available in green and red forms; red varieties are generally milder and more mint-like in flavor. Shiso flowers are light purple and form diagonally along the stem. The flowers are fragrant, with earthy and slightly spicy notes, and are commonly used in Japanese cuisine and medicine. As fall temperatures cool, plants naturally decline and will readily self-seed if flowers are not removed. Due to its aromatic compounds, Shiso naturally repels many insects.

Soil

Shiso prefers fertile, well-draining soil with a slightly acidic pH of 5.5–6.5, though it will tolerate average garden soils. Incorporating compost or organic matter prior to planting supports strong growth. Soil should be kept consistently moist but never waterlogged, especially during early growth stages, as seedlings are susceptible to damping off.

Seeding

Shiso can be started indoors or direct-seeded outdoors once frost risk has passed. For indoor starts, lightly press seeds onto pre-moistened soil, covering no more than 1/4 inch, as seeds require light to germinate. Maintain warmth and humidity using a cover until germination, which typically occurs within 7–21 days. Harden seedlings off before transplanting outdoors after the last frost. For direct seeding, wait until nighttime temperatures remain above 50°F. Sow seeds approximately 1 inch apart and thin seedlings to 8–12 inches apart once established. Soaking seeds for up to 24 hours prior to planting may improve germination rates.

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Pest & Disease Management

Shiso is largely pest-resistant. Aphids may occasionally appear but are rarely problematic. Proper spacing, airflow, and moisture management help prevent disease issues.



Highlights

Shiso is easy to grow in summer conditions, it supports pollinators, naturally repels many pests, and provides repeated harvests of flavorful leaves and seeds. Used extensively in East Asian cuisine and traditional medicine, shiso adds both visual interest and functional diversity to gardens and crop systems.

Fertility

Shiso has moderate nutrient needs and generally performs well with compost-amended soil. Additional fertilization is rarely necessary; overly rich soils may encourage excessive vegetative growth at the expense of flavor.

Weed Control

Young shiso plants benefit from light weeding until established. Once mature, their dense foliage helps suppress competing weeds.

Harvest

Leaves may be harvested once plants are well established, either young for tender flavor or at full size. Cut leaves or stems just above a node using scissors or shears, never removing more than one-third of the plant at a time. Regular harvesting encourages continued growth. Flowers and seeds can also be harvested; seeds are collected once flower heads dry and turn brown, typically from late summer into early fall.

Cleaning & Storage

Fresh shiso leaves are best used immediately, but can be stored briefly in the refrigerator, wrapped in a paper towel and placed in a plastic bag. Leaves may also be dried for longer storage using hang-drying, oven drying at low temperatures, or a food dehydrator set to 125–130°F. Dried leaves can be crushed into seasoning, brewed into tea, or used in traditional dishes. Seeds should be stored in a cool, dry location.

Risk

Shiso self-seeds and may become persistent in gardens if allowed to flower and set seed. Regular deadheading helps reduce unwanted spread.

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Rating any crop's production opportunity or risk is subjective and depends on the region where the crop is to be raised. Genetic advancement for pathogen tolerance and adverse weather condition has been more significant for popular, high seed sales crops such as corn and soybeans. The below table lists some of the issues of producing specific crops and helps guide your process of selecting your cropping choice.

Average rating: 3.4

Issue	1	2	3	4	5
Seed availability				X	
Scouting requirements					X
Drought tolerance				X	
Waterlogged soil tolerance			X		
Disease pressure				X	
Wildlife concerns				X	
Yield swings				X	
Harvest ability			X		
Field loss			X		
Market demand			X		
Soil regeneration			X		
Residue value				X	
Storability				X	
Benefit for following crop			X		

1- very low 2- low 3- average 4- moderately high 5- very high

Seed availability – Price, lead time, and required lot size are consideration for these issues

Scouting requirements – What frequency does someone need to look at the crop?

Drought tolerance – Rainfall patterns are requiring crops go longer between rainfall events.

Waterlogged soil tolerance – Rainfall events tend to produce higher volumes than historical averages.

Disease pressure – Plant stress has increased with the rise of daytime temperatures

Wildlife concerns – Deer, rabbits, voles, resident geese, and others can destroy fragile crops.

Yield swings – How predictable will the income be when this crop goes to market?

Harvest ability – Do we need plans B & C if adverse conditions affect the harvest?

Field loss – How much will be left in the field and can we monetize field loss?

Market demand – Does this crop have an elastic delivery window and are there timing penalties?

Profitability – Is there potential for higher margins needed for a shrinking land base?

Soil regeneration – Does this crop support the next crop?

Residue value – What remains after the target crop? Can we monetize the residue?

Storability – How long can we hold this crop? Will quality be challenging to maintain?