

Plant Hardiness & Tolerance Guide

Plant Name	Low	High	Notes
basil	40°F	70°F+	The cold tolerance of basil begins to suffer when the mercury drops into the 40's (F.) but really affects the plant at 32 degrees F. (0 C.). The herb may not die, but basil cold damage will be in evidence
beans	65°F	85°F	The soil temperature should be no lower than 50 degrees Fahrenheit, and preferably closer to 70 degrees F for best results with germination. Beans will not germinate if the temperatures are too cool.
beets	50°F	70°F	Beets are adapted to grow in cool temperatures, making them a perfect vegetable to plant both in spring and late summer. They thrive when the days are warm (60 to 70 degrees) and nights cool (50 to 60 degrees). They may go to seed if temperatures drop below 50 degrees for an extended period.
broccoli	32°F	70°F	Broccoli and cauliflower can usually survive temperatures as low as 26 degrees Fahrenheit with only minor damage to the leaves. They may survive even lower temperatures if they are acclimated, but usually anything below 26 F will kill the plants if the weather was warmer leading up to the cold snap.
Brussels sprouts	32°F	70°F	The plant will withstand frost and can be harvested until a hard freeze strikes. The best-quality sprouts are produced during sunny days with light frosts at night.
cabbage	20°F	80°F	can withstand frost
cauliflower	10°F	75°F	Cauliflower does not grow well in hot or in severe cold temperatures. Grow in fall, after the temperature is below 75 degrees F, and in winter in locations where the temperature does not fall below 25 degrees.
carrot	15°F	70°F+	Carrots need warm temperatures in order for the seeds to germinate—around 70 degrees Fahrenheit or warmer. That's why carrots are slow to germinate in cooler spring temperatures. However, carrots need cool temperatures for developing sweet, fat roots—around 40 degrees F. Prolonged periods of cold result in long, pale roots.
celery	32°F	70°F	Celery has a low tolerance for heat and prefers a cool, cloudy location where growing temperatures range between 60°F and 70°F. Plant celery where the growing season offers 4 months of cool weather.
cilantro	50°F	85°F	Cilantro is a cool-season crop that does best at temperatures between 50 and 85 degrees F. It can tolerate temperatures as low as 10 degrees F, but if temperatures exceed 85 degrees F it will start to bolt.
chives	0°F	85°F	Onions are as hardy as they come. Frosts, freezing temperatures and snow will not kill them.
collards	10°F	95°F	Collard greens are the most cold resistant of any plant in the cold-hardy Brassica family. Collards can withstand winter temps. down to 5 F. and they usually come through the cold even more flavorful.
corn	40°F	95°F	Corn will germinate and grow slowly at about 50 F (10 C), but the average first spring planting dates across the U.S. usually begin when the average air temperatures reach 55 F (13 C) and soil temperature at seed depth is favorable for seedling growth.
cucumber	65°F	90°F	Growing best between 65 and 75 degrees Fahrenheit, cucumbers can tolerate temperatures as cold as 60 degrees and as warm as 90 degrees Fahrenheit, but prolonged exposure to temperatures below 55 degrees causes chilling injuries to fruit, such as decay, water-soaked spots and pitting.
dill	25°F	90°F	Dill plants are grown as annuals, so they do not have a USDA Hardiness Zone rating. In hot weather, dill may go to seed quickly. Cooler zones can probably grow dill throughout the summer, but in zones 9 and above, the dill growing season is often limited. Dill can also self-sow readily. Dill grows best when soil temperature is about 70°F.

kale	20°F	80°F	Snow can protect plants from extreme cold so that they stay in the garden longer. Kale is one of these plants! Very cold-hardy. Kale does not tolerate heat.
kohlrabi	40°F	75°F	Kohlrabi plants grow when daytime air temperatures are as low as 40 F and can withstand light frost. But they grow best when daytime temperatures are between 40 and 75 F.
lavender	0°F	85°F	These plants may need a sheet covering the lavender bush during winter ice storms. Most damage occurs when ice coats stems, leaves, and base for several days. Snow will insulate lavender plants only if no ice has accumulated before the snow fall.
lettuce	20°F	65°F	Lettuce is a cool-weather crop that thrives in the temperature range 60-65 degrees F, and if thoroughly hardened, most varieties survive temperatures as low as 20 degrees F. Cold-adapted varieties survive much lower temperatures. Frost damage on leafy vegetables doesn't render the plant inedible like a disease. You can harvest non-damaged parts by cutting away brown areas and edges that are frost damaged and save just the leaf parts that are uninjured and your plant will continue to grow.
microgreens	50°F	85°F	The warmth that most seeds do need is commonly called room temperature, around 70 degrees F (21 degrees C) during the day, though somewhat lower than that during the night. Outer limits for all seeds for microgreens range from 50 degrees F (10 degrees C) to 85 degrees F (29 degrees C).
mustard	20°F	85°F	When spent days under the cover of snow they have been known to emerge in perfect condition once the snow melts. Mustard greens have no problem with light frosts, but temperatures below 20°F (-7°C) usually kill plants back to the ground.
onion	0°F	75°F	Onions are as hardy as they come. Frosts, freezing temperatures and snow will not kill them.
parsley	10°F	65°F	Hardy only to about 10 degrees F, though winter mulches or cloches can enhance cold tolerance. Where winters are mild, parsley can be sown in fall and grown through winter.
pepper	55°F	85°F	Seeds need a soil temperature between 70 and 95 degrees Fahrenheit for best germination and won't germinate at all below 55 F. Once they're growing, plants can be kept where the air temperature is 70 F during the day and 65 F at night.
pumpkin	60°F	105°F	Grow pumpkins in the warmest, frost-free part of the year. Sow pumpkins in the garden in spring when all danger of frost has passed and the soil temperature has reached 65°F and night air temperatures are above 55°F. In cool-summer regions grow smaller varieties.
radish	26°F	65°F	Radishes thrive in the cooler weather when frost can be a threat to other crops. They can survive hard freezes as well. Radishes can survive hard frosts as deep as 26 degrees Fahrenheit, say horticulturalists at Texas A&M University. In hard frost, the foliage may suffer frost burn, but the root itself has not been killed and can still be harvested.
swiss chard	15°F	85°F	Swiss chard is very cold-tolerant, & can survive dips to 15 °F without any protection. Swiss chard is certainly the most tolerant of heat. It continues producing leaves through summer, but the quality of the leaves – both flavor and texture – is best in cool weather.
spinach	20°F	75°F	Grows slowly through the winter but will always bounce back in early spring. Spinach is a cool weather crop that grows best when daytime temperature remain consistently below 75°F—commonly in spring or fall. Young plants will bolt when exposed to temperatures below 40°F, but mature plants can withstand temperatures as low as 20°F.
strawberry	22°F	80°F	The ideal temperature for strawberry growing is 60°F to 80°F; those temperatures allow strawberries to develop strong roots and take up nutrients necessary to produce lots of flowers and fruit. At this point they will tolerate temps as low as 22 F. (-6 C.). Once fruit begins to develop, temperatures below 26 F. (-3 C.) may be tolerated for very short periods, but the longer the freeze, the higher risk of injury.
tomato	65°F	85°F	Tomatoes grow best when the daytime temperature is between 65 and 85 degrees Fahrenheit. They stop growing above 95 degrees Fahrenheit. If nighttime temperatures are above 85 degrees Fahrenheit, the fruit will not turn red. Tomatoes need full sun and warm, well-drained soil.
Turnip	40°F	75°F	Turnips lose much of their spiciness and accumulate sugar when they mature in cold weather. Turnips grow best in temperatures from 40°F to 75°F. They are best harvested before temperatures exceed 75°F. Sow turnip seeds directly in the garden 2 to 3 weeks before the average last frost date in spring for a late spring or early summer harvest.