



A word about Minnehaha Master Gardeners: We are volunteers trained through the South Dakota State University Extension [Master Gardener Program](#). The mission of MMG is to enhance and supplement community educational efforts of the SDSU Extension Master Gardener Program and to provide research-based education and information on horticulture and environmental stewardship. For more information on becoming a Master Gardener, visit [SDSU Extension Master Gardener volunteer program](#)

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Find out more about us!



Are Heat and Humidity Affecting My Vegetable Yield?

Carla Goetsch, Master Gardener

Warmer temperatures are expected with climate change, and we may see more extreme temperature swings. Pollination is highly sensitive to these temperature extremes and, overall, affects yield. The plants have very few adaptation strategies to cope with hot temperatures other than waiting until it cools down. This is more difficult for varieties of plants that are “determinate”. The flowering occurs over a longer period with “indeterminate” varieties, so waiting for cooler temperatures is more of an option.

High humidity complicates the problem. The air does not cool as quickly at night in high humidity, so the plants have less recovery time. Vegetables get particularly stressed when overnight temperatures do not get below 75 degrees. One of the ways plants cope with high temperatures is through transpiration, which moves water up the plant and, as it evaporates, cools the plant. In high humidity, it does not evaporate as well, so it does not cool the plant as efficiently. When the leaves are too warm, photo-synthesis is less efficient, and the plant's pollen is less viable when daytime temperatures exceed 90 to 95 degrees. When it is humid, this problem can occur even at lower temperatures. Humidity also makes the pollen stickier, so it fails to move properly between flowers, reducing pollination.



Gardeners often notice blossoms dropping. The most affected plants are tomatoes, peppers, eggplant, and beans. Tomatoes may ripen unevenly, and peppers develop thinner walls. The cool-season vegetables and herbs tend to bolt more quickly.

Higher humidity can also increase the risk of fungal diseases such as powdery mildew, early blight, and leaf spot. To reduce disease, avoid watering leaves. Use soaker hoses or water the base of the plant. Watering in the morning also helps to dry off the leaves. Mulching the soil will help keep soil moisture even, moderate soil temperature, and reduce soil splashing onto the fruit that could spread disease. Air circulation is also improved when overcrowding is avoided. Excessive leafy growth can be limited by not using too much nitrogen fertilizer.

The best vegetable yield may occur from late August into September. The ideal temperature for tomatoes is 70 to 85 degrees during the day and 55 to 70 degrees at night. Often, humidity levels are more moderate during these months as well. Therefore, don't give up on watering and caring for your vegetable plants yet, since the best may still be to come.

Turning Good Intentions into Success...

Houseplant Series, Part 6: The Fast Growers Built for Opportunity

Pam Conklin, Master Gardener



Some plants prepare for hardship. Others are prepared for growth.

Spider Plant, Rubber Plant, and Areca Palm evolved in environments where light, water, and warmth are available for much of the year. Rather than storing resources for long periods, these plants invest their energy in producing leaves, roots, and new shoots whenever conditions allow.

Their strategy is simple: **capture resources and grow.**

Spider Plant (*Chlorophytum comosum*) produces arching leaves and sends out runners that develop into baby plants. This allows it to colonize available space quickly.

Rubber Plant (*Ficus elastica*) develops large, glossy leaves designed to capture sunlight efficiently while retaining moisture. Areca Palm (*Dypsis lutescens*) produces numerous stems and feathery fronds, creating a dense canopy that maximizes light interception.

In nature, these plants solve the problem of competition by growing quickly when resources are abundant.

Because they are active growers, they generally require more light and water than the drought-tolerant plants featured in previous articles. When given adequate conditions, they respond with noticeable growth and lush foliage.

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Houseplant Series, Part 5: The Fast Growers Built for Opportunity Continued from page 3

Care at a Glance

- Light: Bright, indirect light
- Water: Keep soil evenly moist but not soggy
- Soil: Rich, well-draining potting mix
- Temperature: 65–85°F
- Humidity & Airflow: Average to moderate humidity; avoid cold drafts

Extension Insight

Plants adapted for rapid growth often produce larger leaf surfaces to capture sunlight and support photosynthesis. While this allows them to grow quickly, it also increases water loss through transpiration. As a result, fast-growing plants typically need more consistent moisture than succulents or drought-adapted species.

<https://extension.sdstate.edu/spider-plants-houseplant-how>

<https://www.gardeningknowhow.com/houseplants/areca-palm/growing-areca-palm-indoors.htm>

[Rubber Tree \(Ficus Elastica\): Indoor Growth and Care Tips](#)

Common Problems

Brown leaf tips on Spider Plants and Areca Palms often indicate low humidity, inconsistent watering, or mineral buildup from tap water.

Rubber Plants may drop leaves if exposed to sudden temperature changes or insufficient light.

Slow growth, pale foliage, or long gaps between leaves often indicate inadequate light.

How to Help Them Thrive

Think like a forest edge.

Place these plants near bright windows where they receive abundant indirect light. Water when the top inch of soil begins to dry and rotate containers periodically to encourage balanced growth.

These plants reward attention. New leaves unfurl regularly, offsets develop, and stems thicken over time. Their larger size and vigorous growth make them excellent focal points in an indoor landscape, bringing life, movement, and structure to a room.

Next month: We'll conclude the series with plants that teach perhaps the most important lesson of all—humidity matters. We'll explore Boston Fern, Calathea, and Phalaenopsis Orchid, species whose success depends as much on the air around them as the soil beneath them.

Are My Begonias Worth Overwintering?

Carla Goetsch, Master Gardener



Begonias are among the favorite plants of summer, and it is sad to see them die from a frost. When overnight temperatures start getting down to 45-50 degrees, it is time to decide if a begonia is worth saving over the winter. Knowing the type of begonia will determine how you will overwinter them.

Wax begonias (Left) and Rex begonias (Right) are tender perennials. It may be easier to keep these plants in pots so they can be moved indoors around mid-September. Remove leggy growth and older blooms.

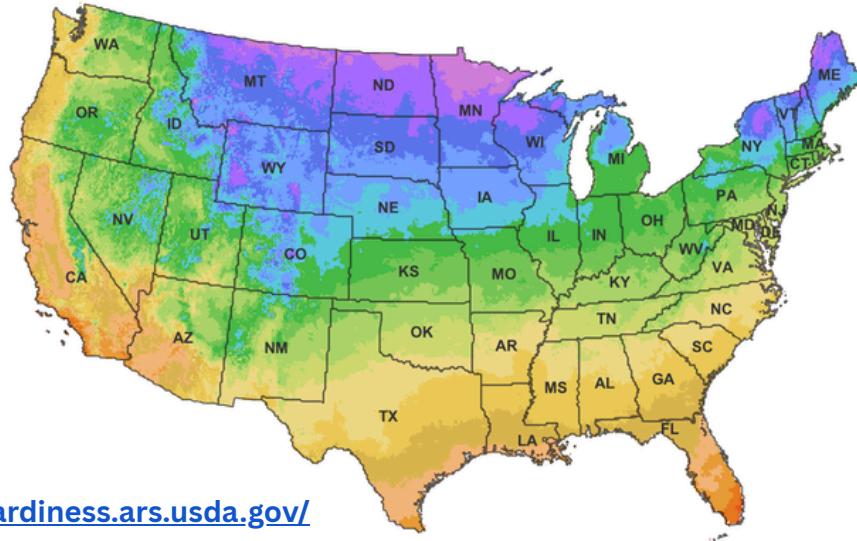
Place pots in a location with bright indirect light and consistent temperatures of 60 to 73 degrees, away from heat vents. Wait to fertilize until spring. Check plants often to ensure they remain pest-free. The most frequent cause of plant death is overwatering, so use a consistent watering schedule when the top inch is dry. If in doubt, it is best not to water. In the spring, wait until night temperatures are over 50 degrees and slowly acclimate to brighter light, avoiding direct sun.



A humidifier may help when winter air is particularly dry. Rex begonias need higher humidity, so they do best in a bathroom.

Cane begonias should be treated like rex and wax begonias. However, if space is limited, cane begonias can be allowed to go dormant by reducing water and then cutting them back to 2" above the soil, leaving them in a dark, cool (around 50 degrees) location until spring. Rieger begonias are hybrids between wax and tuberous begonias, but are treated like wax begonias. They can live for years with proper treatment.

Tuberous Begonias (above) will start dying back when temperatures start getting below 50 degrees. Types of tuberous begonias include the nonstop series and picotee type. During this time, reduce watering. Lift the tubers, brushing off excess soil, and allow them to dry out in a cool, dark place. They can be stored in sand or peat moss until it is time to plant them again. In the spring, repot in a pot with good drainage, as overly wet soil can lead to root rot.



<https://planthardiness.ars.usda.gov/>

ABCs of Gardening: S - Z

Bonnie Lynch, Master Gardener

The following article is a reprinted series from 2008-2009.

S is for Scarify – The chemical treatment or physical abrasion done to the outer coating of the seed before sowing to weaken the seed coat. This process increases the rate of water uptake and, in turn, the rate of germination.

T is for Tender – This term generally applies to plants that are damaged by temperatures below five degrees centigrade or forty-one degrees Fahrenheit. Tender plants cannot tolerate frost or freezing temperatures.

U is for Umbel – An umbel is the arrangement of flowers on a plant. In an umbel, the flower stalks all spring from the same point, like the ribs of an umbrella. Plants like carrots, parsley, and dill have umbel flower clusters.

V is for Viability – In gardening, viability refers to a seed's ability to germinate and produce a strong, healthy plant. It's essentially the "shelf life" of your seeds, indicating how long they are likely to remain effective. Viability varies depending on how the seeds are stored (cool, dry, dark is best).

W is for Wilt – Wilting is the loss of rigidity of non-woody parts of plants. This is normally the result of reduced water in the plant's cells. Lower water availability may result from drought, high salinity, or saturated soil conditions. Permanent wilting leads to plant death.

X is for Xylem – The xylem is the supporting and water-conducting tissue of a plant, consisting mainly of vessels (continuous tubes through which water is distributed to all parts of the plant) and tracheids (water-conducting cells which are longer and narrower than vessels but no less effective in water transport).

Y is for Yellowing – Foliage may yellow due to the loss or breakdown of chlorophyll. This can result from disease or insect infestation, poor growing conditions, or a lack of nutrients.

Z is for Zone – A region that shares similar climatic and rainfall conditions, producing similar growing seasons. Zones are used to help gardeners predict the likelihood that a plant will survive in their area.