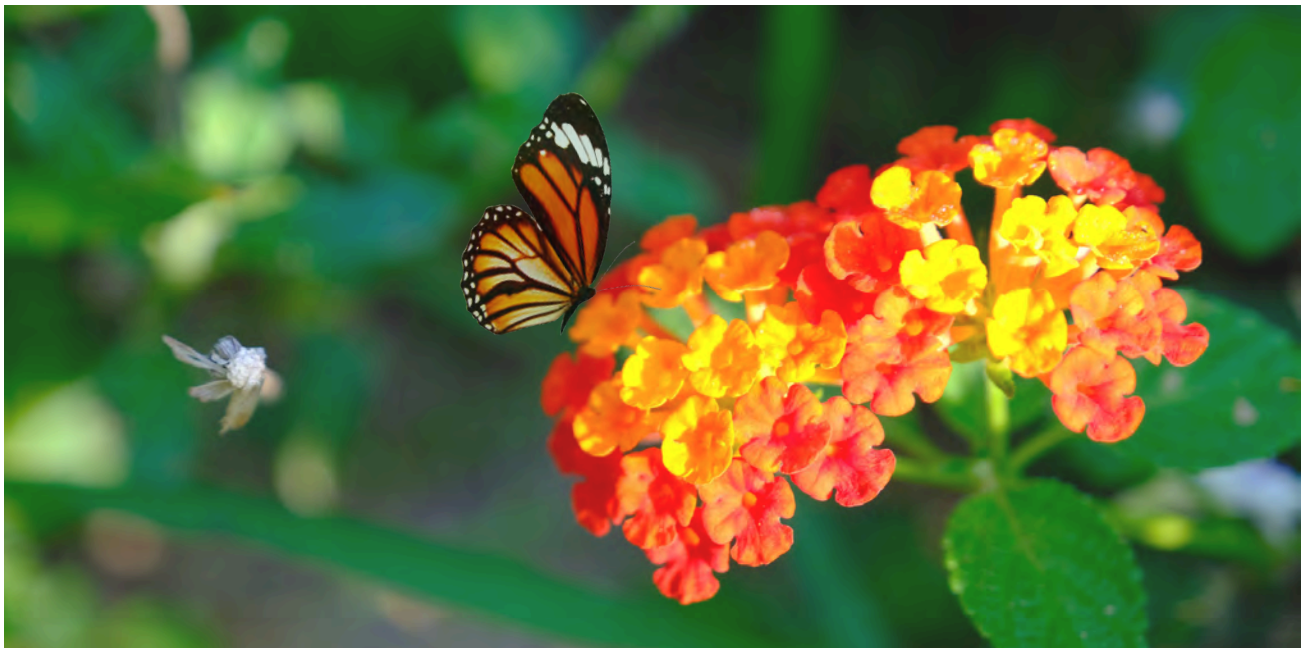
JUNE 2025 VOL. 8, NO. 6

Denton County Master Gardener Association

THE ROOT

Grow With Us



WHAT'S GROWING ON

CONNECT WITH US ON THE WEB https://dcmga.com

Buds from the Board

BY RAELINE NOBLES, PRESIDENT

Welcome to the June 2025 edition of *The Root*! There's still a lot of gardening to do in June before our Texas heat chases us inside before noon. We hope you enjoy this edition of *The Root* to help you navigate through the "must do's" for early summer while also enjoying some great ideas to consider for your gardens now and into Fall. It's never too early to start dreaming about our next best growing season just around the corner!

© Panattar via Canva.com

It's also a great time to think about indoor gardening ideas for the upcoming hot months. Take a look at the light source your home receives and that will give you the first idea of what might grow successfully indoors. How long is the bright light coming in that kitchen window? Are there windows with direct sunlight? Shade only? There are so many plants out there - small enough for indoors and varieties galore to fit the amount of light you have available.

Succulents work pretty good for me – small ones since I have only one window worth growing anything from! Plus, they are often super easy to maintain so no need to worry about them if we take a few days out of town. And the variety of succulents is outstanding – it's a treat to see what local nurseries have in stock because they all have something different. It's also fun propagating succulents because for a beginner, there's some that are super easy to reproduce.

If succulents are something you'd like to learn about visit our website, https://www.dcmga.com. At the Home Page, click on "Learn More" then "Plant Facts." There's a section on succulents and cacti that might interest you. We also have community education free of charge during the year. Watch our calendar for upcoming classes on succulents (and many other topics).

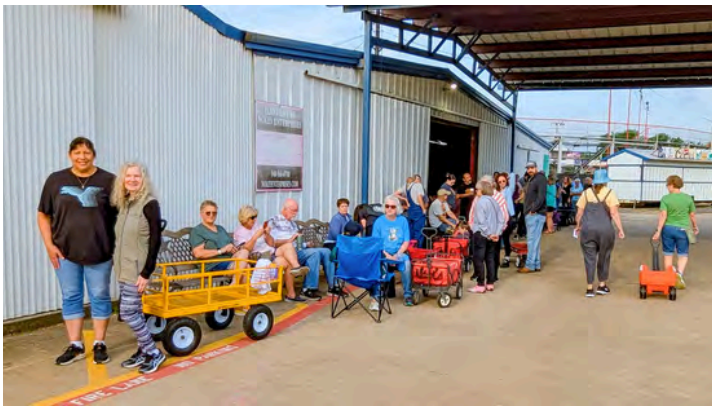
Whatever you decide to do for gardening this month and into the heat of summer, have fun; experiment with something new and see where it takes you. Until next time, enjoy the early summer and whatever you grow, grow it with love and kindness.

~ Raeline

2025 Plant Sale: Sold Out Success!

BY PAT EDWARDS, MELISSA MIGAS AND RUSS ALLEN

WOW! Another incredible plant sale. Thanks to our many volunteers and our loyal public, we had record attendance and sold out early. The morning dawned with beautiful weather and customers lining up as early as 7am. By 9am we opened with over 300 people in line! Many brought their own wagons (large ones) and filled them up quickly. We held the sale at a new location: the North Texas Fairgrounds.



The money raised is used to fund the various community outreach and educational events sponsored by the Denton County Master Gardeners. We are grateful to our customers for supporting this fundraiser and to our volunteers for making this event a huge success. We look forward to 2026 and invite you to come back for more beautiful plants, expert guidance from the master gardeners, and a positive shopping experience.

Photos courtesy of DCMGA members

Plant of the Month: Lantana

BY TRACY SOUTHERS-PARKER

Lantana not only survives, but THRIVES during the hot, dry Texas summers, making it a good choice for Denton County gardens. Available in native and adapted varieties, lantana can be grown as a shrub, groundcover or in containers. For optimal growth, plant lantana in full sun locations receiving at least 6-8 hours of direct sunlight daily. While adaptable to most soil types, lantana performs best in well-draining soil with a pH between 6.5 and 7.5.

Perennial and Annual Varieties

In Texas, most lantana varieties are considered perennials in the warmer parts of the state, but behave as annuals in colder regions. In Denton County, growing lantana as a perennial can be tricky due to the area's placement in USDA hardiness zone 8a (meaning winter temperatures can drop to 10-15°F).

Most lantana varieties will die back to the ground after the first hard freeze. In mild winters, established plants often survive with roots intact and resprout in spring. In severe winters or with young plants, complete die-off can occur.

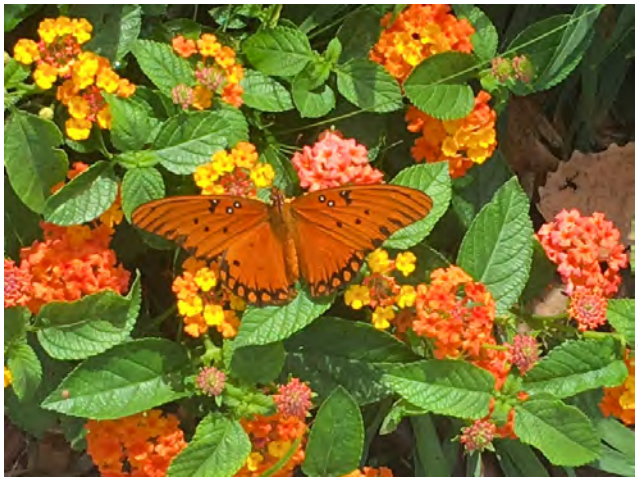


Photo courtesy of DCMGA Member Donna Hull

Texas Lantana (*Lantana horrida*)

Best Performing Lantana Varieties for Denton County

- Texas Lantana (*Lantana horrida*) – Best overall cold hardiness. The native Texas variety features bright yellow-orange blooms that attract butterflies and hummingbirds.
- Miss Huff – Known for excellent cold tolerance in North Texas, this variety reliably returns producing orange-pink-yellow flower clusters.
- Dallas Red – Developed for North Texas conditions with good rebound after mild winters. Heat-resistant cultivar with red-orange bicolor blooms.
- Texas Flame – Moderate cold tolerance with beautiful color transitions. Multi-colored blooms transitioning from yellow to orange to red.

If you're looking for lantana to use as an annual in your garden design, any variety can serve this purpose, but these more compact cultivars are particularly well-suited for annual use in containers or seasonal color beds: Bandana® series, Landmark™ series, and Lucky™ series.

Lantana (Cont.)

Seasonal Care Guide

- Plant lantana after the last spring frost (typically mid-March to early April).
- Apply 3-4 inches of mulch around (but not touching) the base of plants in late fall to insulate roots.
- Wait until danger of frost has passed in spring (usually mid-March) before cutting back dead growth to promote new, fuller growth.
- Consider planting in protected locations (southern exposures, near structures) to increase winter survival.

Resources

- Lady Bird Johnson Wildflower Center. (2022). Native Plant Database: Lantana urens. University of Texas at Austin.
- Texas A&M AgriLife Research. (2020). Texas Superstar Plants: Selection and Growing Guide. Texas A&M University System.
- Texas AgriLife Extension. (2021). Earth-Kind Landscaping: Lantana. Texas A&M University.

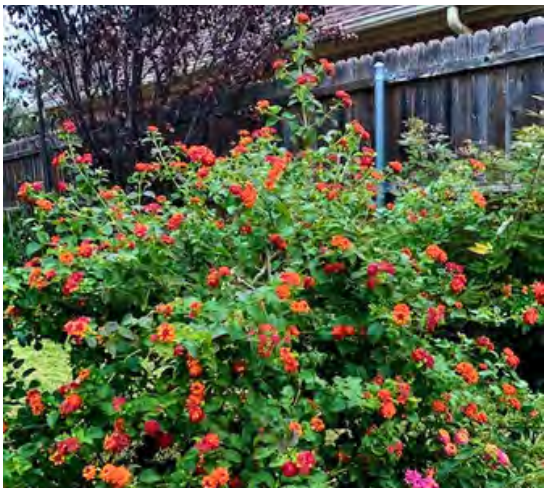


Photo courtesy of DCMGA Intern Tracy Southers-Parker

Dallas Red Lantana

WHAT TO PLANT IN JUNE

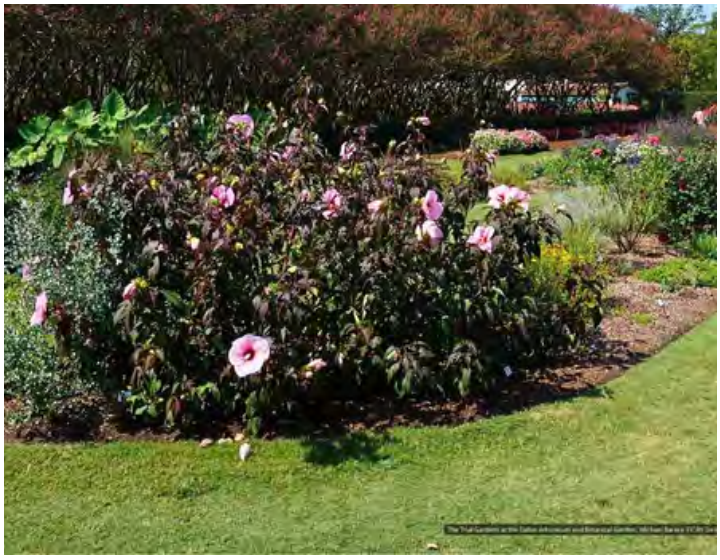
- **Bermuda, Zoysia, and St. Augustine grasses can all be planted as sod**
- **Time for indoor seed starting for your fall garden**
- **If you are using synthetic fertilizers, be careful not to burn plants**
- **Trim back any unsightly limbs or branches of perennials**
- **Remove spent blooms to encourage additional blooms**
- **Always cut back blackberry canes that have bloomed and fruited**
- **Mulch all bare soil, keeping it off of tree and shrub trunks**

CLICK HERE FOR MORE MONTHLY TIPS

You're Invited

June General Meeting & Program - Open to the Public

"Favorite Plants of the Dallas Arboretum"



Join Dallas Arboretum docents Denise and Max Davis as they share their favorite resilient plants that thrive in North Texas. Many have been tested in the Arboretum's Plant Trial Program and withstand extreme weather while staying beautiful. Whether you're a seasoned gardener or a beginner, you'll leave with great plant ideas for your landscape!

June 11, 2025, 10AM
Global Spheres Center, Solomon's Porch
7801 S Interstate 35E, Corinth,TX 76210

CLICK HERE TO SEE OUR JUNE CALENDAR OF EVENTS

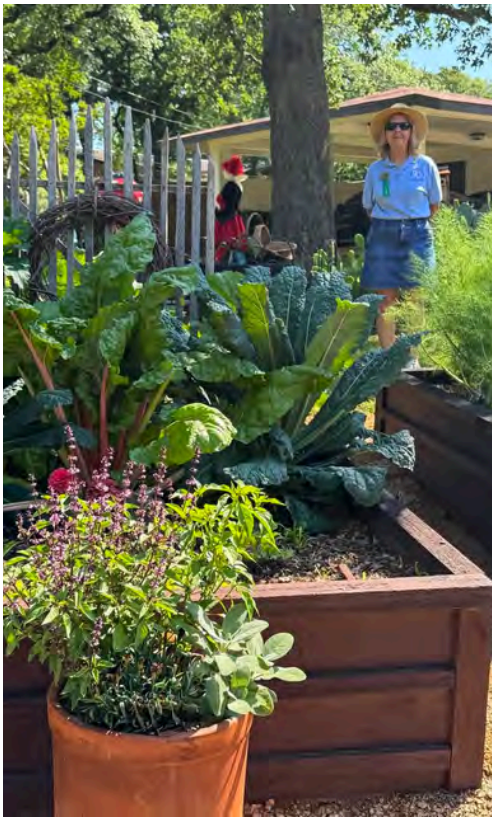
2025 Garden Tour Welcomed 500+ Visitors

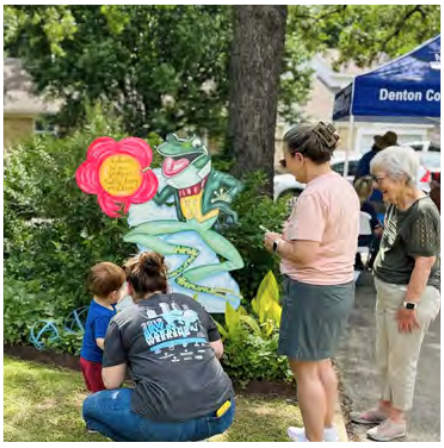
BY MELISSA WEAVER

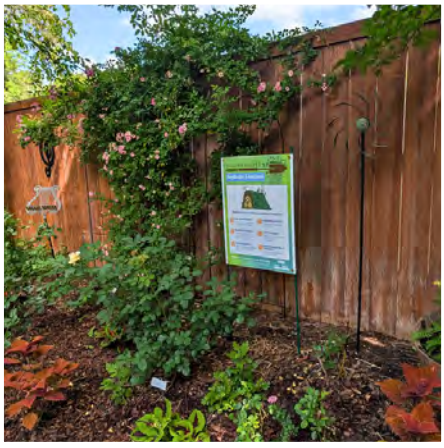
April showers did indeed bring flowers, smiles and so much more during the DCMGA 2025 Garden Tour on May 10. More than 500 visitors enjoyed a rare opportunity to take in the beauty and creativity of four private gardens while learning about the practices that make them so unique. An exciting addition to the tour was Shiloh Field Community Garden, located in the city of Denton. Here visitors learned about sustainable gardening practices that provide local food banks with over 60,000 pounds annually.

While beauty was apparent, education was at the forefront. Visitors were able to Dig Deeper into topics including rose care, creative solutions for water drainage, water conservation, raised bed gardening, hügelkultur, bee keeping, and cacti and succulent care. Educational posters and Master Gardener volunteers were available to answer questions, and as an added bonus, guests were provided downloadable links to educational topics and a plant list for each property. Thank you to the tremendous support of the public and the more than 100 MG volunteers. We couldn't have done it without you!

Mark your calendar: DCMGA 2026 Garden Tour will be held May 9, 2026!







Photos courtesy of DCMGA Members

Feature Article: Seeking Shade Cloth

BY JIM MEEK & DONNA HULL

In Texas, we can count on one thing in July and August: hot, intense sunshine. We humans can go indoors and cool off (or dive into cool water outside), but our plants are "stuck" in their appointed places in our gardens. There they must endure the hours of sunshine which, while welcome in the spring, may now be a hazard to their very existence. One possible solution, depending on the position of the sun and other factors, is to use shade cloth.

The Advantages of Shade Cloth

The most important advantage of shade cloth is in its name: it provides shade. It does not reduce the number of hours of sunlight, but it does reduce the intensity of that sunlight. Reducing light intensity results in less transpiration (water loss from the leaves due to evaporation), less sunscald of crops such as peppers and tomatoes, and it cools the air and soil. Cooler soil temperatures not only reduce plant stress but also reduce water loss from the soil. AgriLife plant trials in East Texas in 2022 showcased a number of species that were unable to withstand the full impact of Texas summer sun, but thrived under 30% shade cloth.

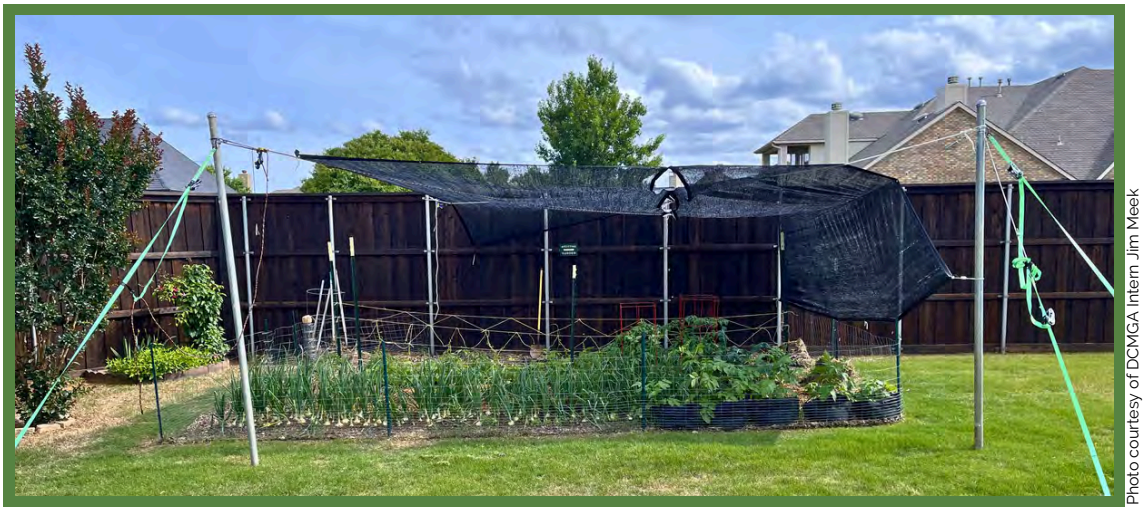


Photo courtesy of DCMGA Intern Jim Meek

Not all Shade Cloth is the Same

In terms of the fabric, there are two types of shade cloth: (1) knitted, which is made of a polyethylene blend; and (2) woven, which is made of 100% polypropylene. Knitted shade cloth is fabric-like, lightweight, and durable. Woven shade cloth is heavier and is generally more affordable. However, you do get what you pay for: if woven shade cloth is torn it will unravel and it will quickly become unusable. So while knitted shade cloth is more expensive, it is the better investment for the long haul (E. Smith, personal communication, May 12, 2025).

Shade Cloth (Cont.)

When choosing shade cloth, there are two more characteristics to consider. Density, the most important, is the percentage of light blocked by the cloth. This is a function of the weave density. For example, a 30% shade cloth blocks 30% of incoming light and allows 70% through to the plants. In general, AgriLife recommends no more than 30-50% shade cloth in most flower and vegetable gardens.

The second characteristic to choose is color. In the past, most shade cloth was black. Black is still the most commonly found color in stores and online. However, it is possible to buy knitted shade cloth in multiple colors, including white, tan, gray, blue, green, and red. Different colors control the types of light wavelengths reaching the plants. (For more information on this aspect of shade cloth, see the Resources section below.)

Important Points to Consider

First, before making any investment, ask yourself, "Do I really need shade cloth?" Look at the layout of your yard and garden, noting the direction from which the sun shines in the morning and where the shade falls in the afternoon due to fencing, home structures, and trees. If your plants are protected from the worst of the afternoon sun (between noon and 4 pm), they may not need shade cloth. However, if your plants have direct western sun exposure during the afternoon, your plants might benefit from some protection.

Photo courtesy of DCMGA Intern Jim Meek

Shade cloth used to protect plants from afternoon sun.

Second, how large of a shade cloth do you need? What kind of support system can you buy, create with spare materials, or modify (i.e. use an existing fence post)? Take your budget into account and weigh the time, effort, and cost of putting in a shade cloth system against the time, effort, and cost of the plants you stand to lose in the heat.

Finally, assess the following: (1) Are there any HOA restrictions or city ordinances? (2) Are cosmetics or functionality more important to you? (3) Can you design a shade structure that won't be destroyed by high winds? Typical North Texas summer winds are southerly, but a strong thunderstorm can bring winds from any direction.

Shade Cloth (Cont.)

Preparation and Execution - One Gardener's Approach

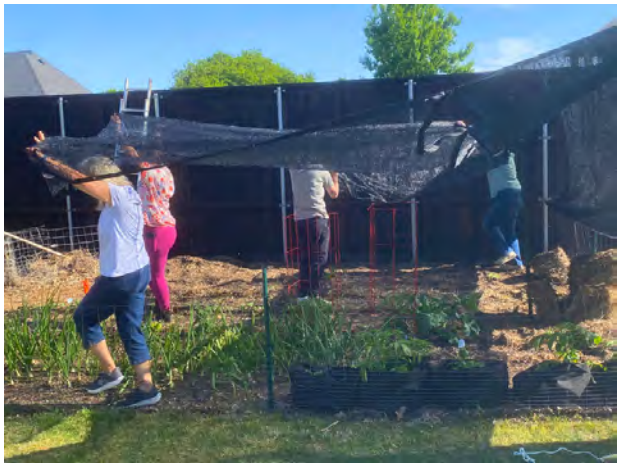
There are many ways to implement a shade cloth system. The following bullet points describe how DCMGA Intern Jim Meek, this year with the help of six fellow Class of 2025 interns, installs shade cloth annually over his backyard vegetable garden. According to Jim, planning and preparation take more time than actual setup, which requires several people to help.

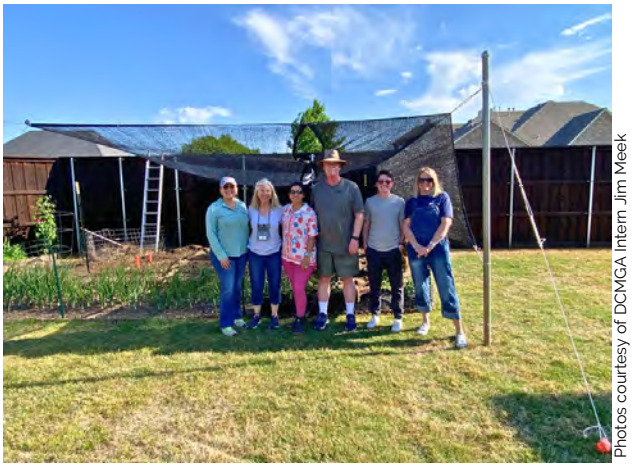
- Before beginning, gather any tools, supplies, and ladders that might be needed.
- For reference, the dimensions of his garden are approximately 19 ft by 22 ft.
- Various sizes of shade cloth can be purchased from big box stores and online garden supply stores. In this case two 10 ft by 20 ft shade cloths were purchased online, with one being 70% sunblock and the other 40% sunblock.
- The two shade cloths were zip-tied together at the grommet points to create a single shade cloth totaling about 20 ft by 20 ft of coverage. (Small tears or gaps where they join are not important and, in fact, improve circulation around the shade cloth, which is a benefit.) The shade cloths are normally rain-permeable and will probably give you several years of use.
- Next, build the support structure. In Jim's yard, he wanted to have a few feet of vertical cloth on the western side, as there is no natural shade in that direction. The southern boundary of the garden is an eight ft tall board-on-board fence with steel fence posts set in concrete.
- Two posts were set in the ground at the northwest and northeast corners and existing fence posts were used for the rest of the corner supports.
- A cable was suspended on the western side approximately eight feet in the air, spanning the distance between the fence and the post in the northwest corner.
- The combined shade cloth was then positioned over the cable wire, leading with the 70% sunblock portion over the cable facing the west side, leaving the 40% portion directly over the garden. This gave us about five feet total of vertical cloth and 15 ft of horizontal cloth.
- The back corners of the cloth were then fastened to the pole in the northeast corner and again to the fence on the south side.
- Cross ropes were placed diagonally under the cloth to help with sagging.

Shade Cloth (Cont.)

Although this project took some serious effort, the sun-blocking effect is amazing to feel when you walk under it. This particular system is designed to be temporary in nature, with poles that were simply driven into the ground by a t-post driver; sinking posts in concrete would provide a more permanent support structure. (Always remember that before digging, it is important to know where your water, electric, cable, sprinkler lines, etc. are buried!) It is also possible to create a structure that will allow you to slide the shade cloth out of the way and secure it for most of the year, then move it back into position when desired.

If you are interested in designing a shade cloth system, an online search will provide many different designs. This article provides just one idea about how to create a shade structure. Give it a try - your plants will thank you!





Photos courtesy of DCMGA intern Jim Meek

Resources

- Chen, A. (n.d.). How to choose the right shade cloth that makes a difference to plants. https://www.cmac.com.au/blog/choosing-right-shade-cloth-for-your-plants
- Maughan, T., Drost, D., Black, B., Day, S., Utah State Univ., Utah State Univ., Drost, D., & Frisby, J. (2017). Using shade for fruit and vegetable production. Horticulture/Fruit. https://extension.usu.edu/productionhort/files/UsingShadeforFruitandVegetableProduction.pdf
- Pugnetti, P. (n.d.). Shade Cloth and other aids for Cooling Plants. https://s3.wp.wsu.edu/uploads/sites/2083/2023/07/23-07-30-Shade-Cloth.pdf
- Russell, A. (2024, June 24). AgriLife Research trials guide ornamental production. AgriLife Today. https://agrilifetoday.tamu.edu/2022/07/01/agrilife-research-trials-guide-ornamental-production/
- Throw Some Shade the Right Way with Shade Cloth | BCMG Home. (2024, June 15). https://bexarmg.org/2024/06/15/throw-some-shade-the-right-way-with-shade-cloth/

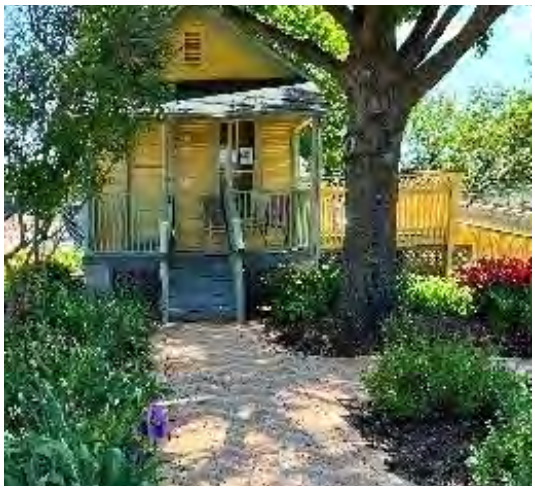
Project Spotlight: Denton Historical Park

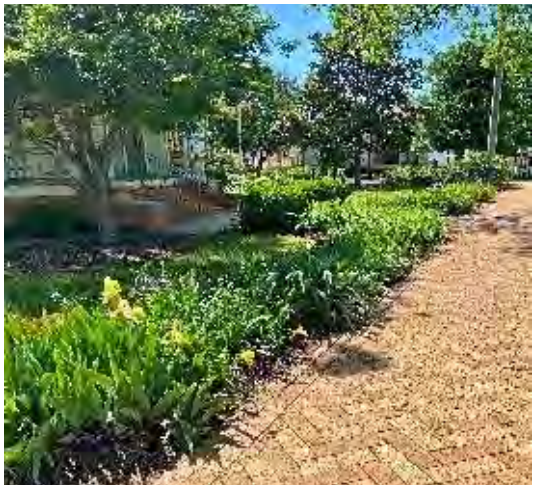
BY LIZ CHANEY & LAURA FRANKLIN

Nestled at 317 West Mulberry Street, Denton Historical Park offers visitors a unique opportunity to step back in time and explore the rich heritage of Denton County. This charming park is a center of community engagement, education, and cultural preservation.

Visit the Bayless-Selby House, a restored Victorian-style residence, which showcases life in Denton at the turn of the 20th century. The Quakertown House tells the story of an African American neighborhood that once thrived in Denton. These museums provide guided tours and educational programs, allowing visitors to immerse themselves in the past. Additional information can be found here.

The Denton County Master Gardeners Association plays a vital role in maintaining the park's beautiful landscape, which complements its historic architecture. Workdays are held on the second Thursday of every month, providing opportunities for Master Gardeners and interns to contribute to the upkeep of the grounds.





Photos courtesy of DCMGA Member Liz Chaney

Education is a cornerstone of the Master Gardeners' mission, and members regularly serve the public through engaging events and programs. During the recent Historic Park Garden Tour Event, the "Ask a Master Gardener" team assisted visitors with questions and provided gardening insights. Looking ahead, the Master Gardeners will host regular "Lunch and Learn" events under the park's shade trees on the second Thursday of each month at noon. Visitors are encouraged to bring a lawn chair and lunch to enjoy the presentations. Upcoming topics include "Good Bugs" on June 12 and "African Violets" on July 10.

Whether you're exploring the beautifully preserved architecture, attending a local event, or simply enjoying the serene atmosphere, Denton Historical Park is a testament to the importance of preserving and celebrating our shared history. With its vibrant gardens, engaging educational opportunities, and convenient location, the park invites visitors to reflect on the stories and landscapes that shaped Denton County.

What Creatures are These: Grasshoppers

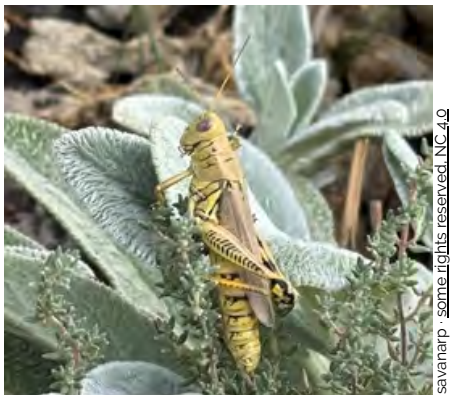
BY JANICE YODER-SMITH

The grasshoppers are coming, and as is often the case, their population size this year is uncertain. During the warm temperatures at the end of March, more grasshopper eggs may have hatched into nymphs (baby grasshoppers). If May rains persist into June, fungi may infect and kill immature grasshoppers. Nymphs that survive will progress through several instars (stages) to become adults over 40-60 days.

The first instars may go unnoticed. Some may be less than 0.25 in. (6.35 mm) long and show no evidence of wings. As the nymphs mature through their instars, they grow and develop wing pads. Some may modify their colors. The sizes of nymphs and adults depend on the species. Adult grasshoppers become more prevalent by the end of June and into July. Adult grasshoppers will lay eggs in water-resistant pods from late July until frost in the fall. The number of elongated eggs per pod depends on environmental favorability and varies between 20 and 120.

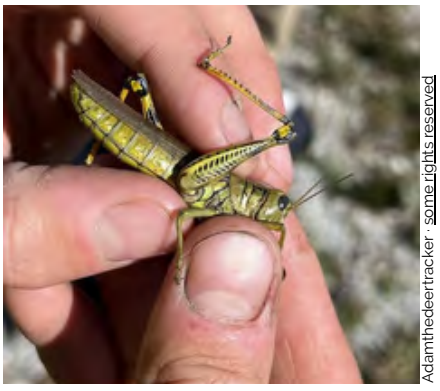
Many grasshopper species live in Texas, but just five cause the majority of damage to gardens and crops. Observers will note that different grasshoppers predominate as summer progresses. The five most damaging grasshoppers, listed in order of nymph appearance, include:

- Two-striped grasshopper, *Melanoplus bivittatus*, as early as April
- Migratory grasshopper, *Melanoplus sanguinipes*, within days of the two-striped grasshopper
- Differential grasshopper, *Melanoplus differentialis*, late April to early May
- Red-legged grasshopper, *Melanoplus femurrubrum*, by late May
- Packard grasshopper, *Melanoplus packardii*, often in June



savanarp · some rights reserved, NC 4.0

Melanoplus differentialis



Adamthedeertracker · some rights reserved

Melanoplus femurrubrum

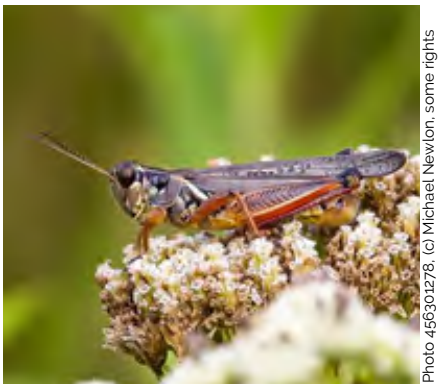


Photo 45630278, (c) Michael Newlon, some rights reserved (CC BY), uploaded by Michael Newlon

Melanopus femurrubrum

Grasshoppers (Cont.)

An adult grasshopper's ability to fly to new locations to find more food makes it difficult to control populations biologically. Providing shelter and water helps attract birds to home gardens to eat grasshoppers. Allowing blister beetles to reproduce yields larvae that will eat grasshopper eggs. Several types of flies consume grasshoppers, as well.

Baits containing protozoan *Nosema locustae* spores provide insufficient control of grasshopper nymphs during large outbreaks. The fungus *Entomorphthora grylli* can infect nymphs and cause adults to climb to the highest point on a plant and die. Fungal spores released from the adult can infect a new generation of nymphs. However, most springs are too dry, and grasshopper populations are too large for effective fungal control.

Mechanical and cultural controls may provide some reduction in grasshopper populations. *Melanoplus* species lay eggs in undisturbed grounds such as fallow fields and ditch banks. Turning the soil and exposing the eggs to air dries them and prevents hatching. Removing weeds from fallow fields and gardens limits the food supply for flightless early instar stages. Using row covers to protect plants will exclude many, but not all, grasshoppers. Some may consider spraying a row cover with pesticide before covering the crops, but gardeners must weigh two factors before doing so. Will they need to pollinate crops under the cover individually? Is the control provided worth the death of beneficial insects that would have pollinated the crops?

In the article "Grasshoppers and Their Control," Texas A&M University Agriculture Extension Entomologist Carl D. Patrick describes how to estimate grasshopper population sizes and includes charts about chemical controls of grasshoppers. The resources listed at the end of this article include a link to that publication and others.

For every pest, a potential benefit exists. Entomophagy is the act of eating insects. Grasshoppers are edible! Chickens like to eat them. People in Mexico, Uganda, and Southeast Asia eat them, too. Grasshoppers provide more protein per gram than poultry. They have more fat than beef, but those are healthy unsaturated fats. They are rich in minerals and vitamins. Eating grasshoppers provides excellent nutrition without requiring large plots of land or increasing greenhouse gases. Those who are squeamish about eating whole grasshoppers might be more comfortable trying ground ones incorporated into foods.

Most Texans love Mexican food. Why not try some chupalines? The link to a recipe is included in the resources for the article.

Grasshoppers (Cont.)

Resources

- *Curry, M. (2015, October 23). Gringo Chapulines recipe - Bug vivant. Bug Vivant. https://bugvivant.com/recipe/gringo-chapulines-recipe/*
- *Grasshopper control tips for Texas - Insects in the City. (2014b, June 6). Insects in the City. https://citybugs.tamu.edu/factsheets/landscape/lawns/ent-1005/*
- *Grasshopper infestation risk grows in 2025. (2025, April 4). Nebraska Ag Connection. https://nebraskaagconnection.com/news/grasshopper-infestation-risk-grows-in-2025*
- *Mauney, S. & Palo Pinto County. (n.d.). GRASSHOPPER CONTROL TIPS FOR TEXAS. https://palopinto.agrilife.org/files/2013/08/Grasshopper-Control-Tips-for-Texans.pdf*
- *Patrick, C. D. & The Texas A&M University System. (2000). Grasshoppers and their control (L–5201). https://kendall.agrilife.org/files/2011/08/l5201_10.pdf*
- *Tan, S. (2024, June 2). What are the health benefits of grasshoppers? WebMD. https://www.webmd.com/diet/what-health-benefits-grasshoppers*

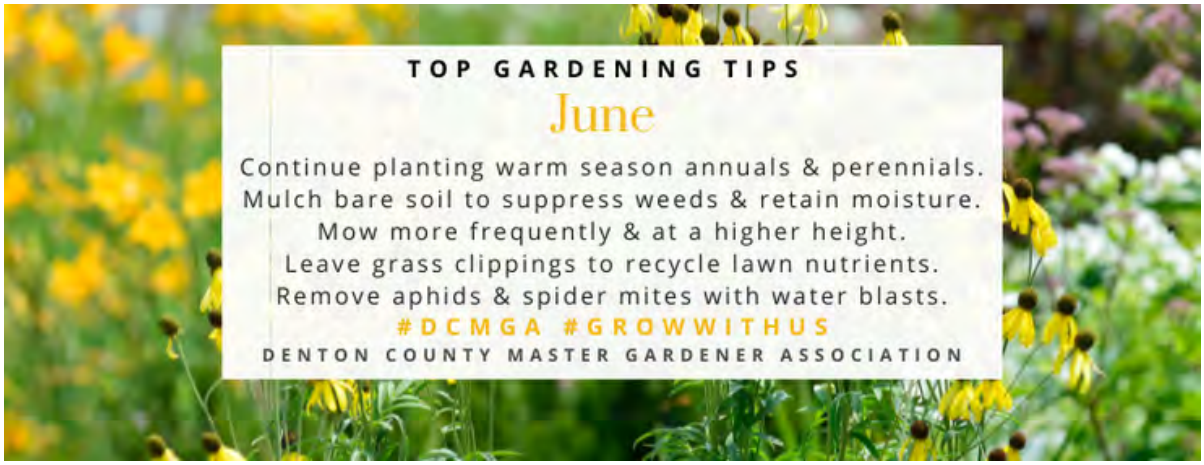
North Texas Gardening

Timely Articles from DCMGA and The Root

Turf Inquiry (Garden Basics)

Groundcovers for Shade (Garden Basics)

Pumpkins (Plant of the Month June 2020)

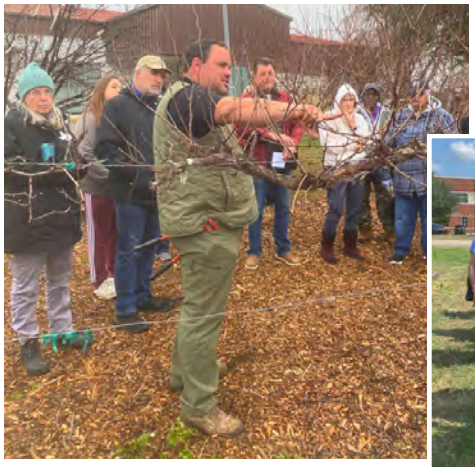


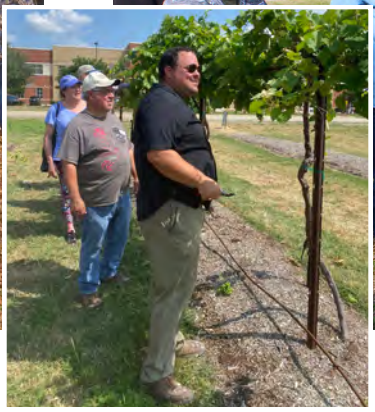
2025 DCMGA SCHOLARSHIP AWARDED

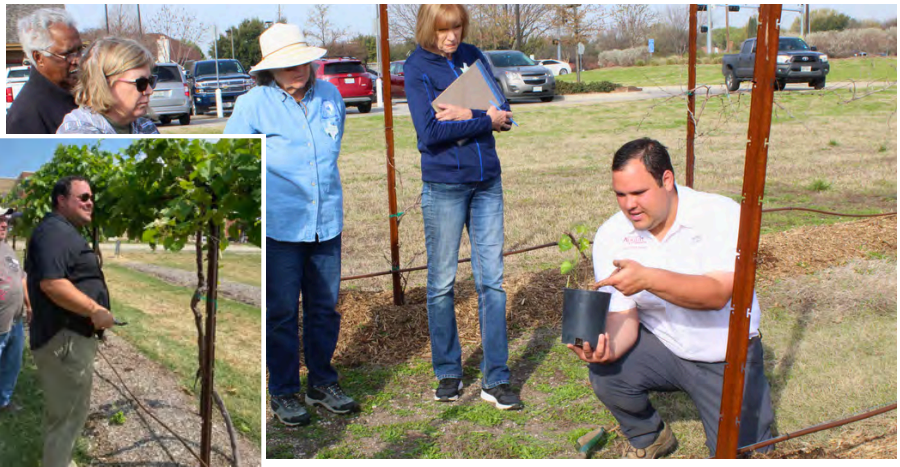
BY ELLEN GAUNTT

With great enthusiasm, the Denton County Master Gardener Association has offered our first $5000 scholarship for a graduating high school student or a college student pursuing horticulture-related studies. After careful review of the applicants, we are very pleased to announce that Michael Cook has been chosen to be the first scholarship recipient. Michael is studying for his PhD in horticulture at Texas A&M University in College Station and conducting research at three locations (High Plains, Hill Country and North Texas), all while working as the Texas A&M AgriLife Extension Viticulturist for all of North Texas, including Denton County. We are looking forward to the many great things Michael will continue to do for North Texas with his advanced education. Congratulations from all of us, Michael!

Information about the 2026 Scholarship program will be published later this year on the DCMGA website, Facebook page and in *The Root*. Feel free to contact us for more information at dcmga.scholarship@gmail.com.







Photos courtesy of DCMGA Member Donna Hull

Denton County Master Gardener YouTube Channel

Click on "Videos" and check out our new presentations!
Don't forget to subscribe!

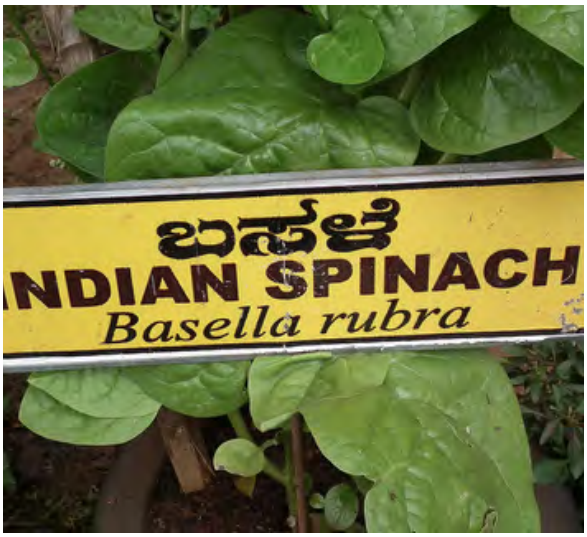
http://www.youtube.com/c/DentonCountyMasterGardener

In The Veggie Patch: Malabar Spinach

BY LIZ CHANEY

Origins and Benefits

Malabar spinach (*Basella alba* and its ornamental variant *Basella rubra*) is not a true spinach. It has been cultivated for generations across South and Southeast Asia, where its sturdiness in high heat and humidity made it an essential substitute for less resilient leafy greens. This ancient crop also has a deep culinary and medicinal heritage. Its name nods to its origins along the Malabar Coast of southwestern India, a region famous for the spice trade. This coastal area cultivated cultural practices that integrated hardy, nutritious plants like Malabar spinach into daily meals and traditional remedies. Over time, diverse local names arose, such as "Ceylon Spinach," "Indian Spinach," or "Vining Spinach." There are two primary types. The first is the green-stemmed *Basella alba,* which produces glossy green stems with tender, heart-shaped to oval leaves. The red-stemmed *Basella rubra* stands out for its dramatic burgundy stems and textured leaves. Pink or white flowers develop along a spike from the leaf axils, eventually forming small berries that darken to purple. Whichever you choose, Malabar spinach could be your new summer vegetable.



Indian Spinach: Rameshng, CC BY-SA 3.0

Celebrated by institutions such as the Brooklyn Botanic Garden, this ancient green reflects enduring cultural relevance in culinary arts and traditional medicine. The University of Wisconsin Extension has also documented its applications in health, remedies and dyes. Malabar spinach boasts a rich nutrient profile, packed with vitamins A, C, and B-complex nutrients along with essential minerals such as calcium and iron, supporting eye and skin health, strengthening bones, and enhancing overall cellular function. It contains potent antioxidants, including beta-carotene, lutein, and—in red-stemmed varieties—anthocyanins, which help neutralize free radicals, reduce oxidative stress, and lower inflammation. The plant's mucilaginous texture (similar to okra) provides soluble fiber that aids digestion and regulates blood sugar levels. Its elevated potassium content assists in maintaining heart health and proper blood pressure regulation. Traditionally, Malabar spinach has been used in Ayurvedic and folk medicine to alleviate conditions such as mouth ulcers and inflammatory ailments, underscoring its role as a natural healer. Once the flowering phase concludes, the plant produces small, berry-like fruits that ripen to a deep red or purple hue.

In The Veggie Patch: Malabar Spinach (Cont.)

These berries, offering a tangy flavor with hints of citrus and pepper, make a refreshing snack or unique salad addition. The leaves, when simmered or blended, release vibrant green pigments, while berries yield purple hues, serving as eco-friendly dyes for fabric, crafts, or food coloring.

Trellis: Shuvaem V, CC BY-SA 4.0

Plant Requirements

Soil: Malabar spinach performs best in rich, fertile soil that drains well—sandy loam enriched with organic matter is ideal. Maintaining a soil pH between 6.5 and 6.8 ensures essential nutrients remain accessible for vigorous growth.

In hot or dry climates, adding organic mulch conserves soil moisture and moderates temperature fluctuations.

Light: It requires six to eight hours of direct sunlight daily, though it can adjust to partial shade, which results in larger, more succulent leaves.

Temperature: As a tropical vine, Malabar spinach flourishes in temperatures between 60 and 95 degrees. Consistent moisture is crucial to maintain the plant's characteristic mucilaginous texture and to prevent premature flowering, which can result in a bitter taste.

Planting

To cultivate Malabar spinach, seeds can be started indoors six to eight weeks before the last frost or sown outdoors once warm temperatures are established. Plant seeds about 1/4 inch deep, and soaking them overnight significantly improves germination rates. Space plants 12 to 18 inches apart and thin them to approximately 6 inches apart. Given its climbing nature, a sturdy trellis is essential to allow the vine to spread gracefully, enhancing both yield and ornamental appeal. For gardeners with limited space, Malabar spinach adapts well to containers, provided proper drainage and support are given.

In The Veggie Patch: Malabar Spinach (Cont.)

Maintenance and Care

Maintenance involves regular, even watering to prevent root rot and bitterness in leaves. Applying a slow-release or organic fertilizer with a recommended NPK ratio of 10:10:20 (at 51 pounds per 100 square feet) encourages lush growth throughout the season. Routine trimming of young leaves stimulates production and manages the plant's size. While Malabar spinach is generally resistant to pests, monitoring for nematodes, fungal leaf spots, or blight is advisable.

Harvesting and Storage

Harvesting Malabar spinach involves regularly pinching off young leaves and tender stems throughout the growing season. Frequent harvesting promotes new growth and delays flowering, ensuring a sweeter flavor. Fruits should be harvested before maturity for culinary use, as berries become bitter with age. Fully mature berries are ideal for eco-friendly dyes or can be dried for seeds. After washing, harvested greens can be refrigerated for up to a week. For longer preservation, blanch and freeze the leaves in airtight bags.

From its vibrant historical roots along the Malabar Coast to its diverse roles in healing practices, culinary arts, and natural dye production, this leafy green embodies a union of history, nutrition, and sustainability. Its benefits—including potent antioxidants, digestive support, heart health, and eco-friendly dye extraction—make it a dynamic addition to any garden and kitchen. It will undoubtedly have a place in my garden this summer!

Resources

- Johnny, S., Tuquero, J., Acosta, M., & Cooperative Extension & Outreach, College of Natural & Applied Sciences, University of Guam. (2021). Malabar Spinach (*Basella alba*). Cooperative Extension & Outreach. https://www.uog.edu/__resources/files/extension/publications/Malabar__Spinach_30__12__21.pdf
- Kumar, S. S., Manoj, P., Nimisha, G., & Giridhar, P. (2016). Phytoconstituents and stability of betalains in fruit extracts of Malabar spinach (*Basella rubra* L.). Journal of Food Science and Technology, 53(11), 4014-4022. https://doi.org/10.1007/s13197-016-2404-8.
- Malabar spinach, *Basella alba*. (n.d.). Wisconsin Horticulture. https://hort.extension.wisc.edu/articles/malabar-spinach-basella-alba/
- Malabar Spinach - Cypress Basin Master Gardeners Association. (2020, May 28). Cypress Basin Master Gardeners Association. https://cbmga.org/malabar-spinach/
- Qiu, Y., & Liu, G. (2024, March 4). Florida cultivation Guide for Malabar Spinach. Ask IFAS - Powered by EDIS. https://edis.ifas.ufl.edu/publication/HS1371
- Red-Stemmed Malabar spinach - Brooklyn Botanic Garden. (n.d.). Brooklyn Botanic Garden. https://www.bbg.org/article/red-stemmed_malabar_spinach

Gardening Grandma Says...

BY BARBARA BROWN & IVY SUMMERFIELD

Humans transitioned from hunting and gathering to growing food about 12,000 years ago. Over the millennia, they found some tricks to increase their harvest. What they learned, they passed down to their children. Today, some of us are fortunate to have a grandmother, aunt or neighbor who continues the tradition of sharing old-fashioned gardening wisdom. The Gardening Grandma series puts these tips and tricks to the test of modern science by answering the question: Does it really work? Or, is it a myth?

"Gardeners should add pennies to plants in vases or around plants in the garden because the copper in pennies kills fungus and helps to keep plants healthy and flowers fresh longer."

Gardening Grandma is SOMEWHAT Correct With This Advice

The recommendation to add pennies to the garden shows an understanding of the importance to plant health provided by minerals like copper, nickel, and zinc. Certain metals also provide trace nutrients, act as natural fungicides, and are pest deterrents. So, let's not dismiss Gardening Grandma too quickly and understand why she is SOMEWHAT correct.

The Story

Turns out that the truth or myth of the benefit of adding pennies depends on when the penny was minted. In 1787, a copper penny was made of 100% copper. Over the centuries, the penny's composition changed several times. During the War of 1812, there was insufficient copper to make pennies. Beginning in 1856, nickel was added to the production of pennies, which increased their durability and decreased production cost. In 1864, zinc was added. Once again, changes came in 1943, and the government created steel pennies because copper was needed to build equipment for World War II. In 1947, the pennies' composition changed back to a bronze with copper, tin, and zinc. In 1962, the composition was limited to copper and zinc, which was issued until 1982. In 1982, the penny changed again to 95% zinc and 5% copper planchet.

So, I have checked the "Myth" box for this question primarily because there is not enough copper in today's penny to positively affect plants, their surrounding soil, or flowers in a vase.

Gardening Grandma Says... (Cont.)

More About How Metals Affect Garden Soil

We know that metals, although important in the makeup of the soil, if over-applied can harm your plants, while not having adequate amounts can do absolutely nothing to help your plants. In the plant world, metals found in soil minerals are known as essential trace elements, or micronutrients. Knowing your soil type and the benefits of each metal will increase your success. I know it would be great to just stick pennies into the ground and hope they provide the minerals needed for plant growth and development. But before you go throwing your pennies into the garden, we strongly recommend getting a soil test. From the test results, you can determine exactly what your soil needs. For more information, see the Texas A&M AgriLife Soil Testing Lab website.

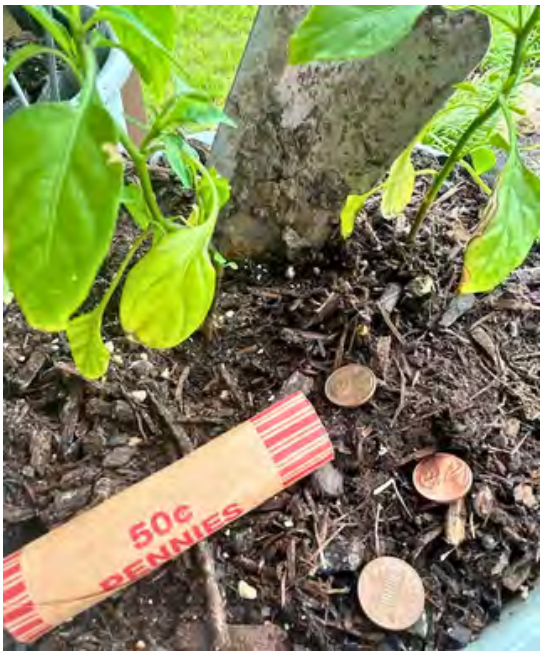


Photo courtesy of DCMGA Member Ivy Summerfield

Based on the results of your soil test, if your soil needs small amounts of these micronutrients, there are commercial products available. Be sure to follow the directions for the application. One final suggestion: "In alkaline soils (pH is high), several soil micronutrients, including zinc, copper, and cobalt, become less available to plants. Also, at high pH, phosphorus precipitates (becomes insoluble) with the higher levels of calcium in the soil and therefore becomes less available to plants." Adding organic material to your soil will help lower the pH.

So, back to the questions about pennies providing enough copper to benefit your plant needs. Gardening Grandma was SOMEWHAT correct in the fact that over time if you had a LOT of pennies that were 100% copper and several years or decades to wait, your soil might uptake enough copper to help your garden plants.

How Metals Help Plants

Let me see if I can clearly bring to light the benefits of metals such as copper, zinc, tin, nickel and bronze, all of which have been used in making pennies, and then you can decide if you would like to follow this practice or use your pennies for arts and crafts, to embellish the garden, let them sit in the jar they are in currently, or happily throw them in the sparkling water basin we call a wishing pond.

Gardening Grandma Says... (Cont.)

COPPER

- Natural micronutrient found in soil
- Essential in the production of chlorophyll, vital to photosynthesis
- Promotes the growth of the root system
- Facilitates disease prevention
- Natural pest control
- Helps plants tolerate stress
- Natural antimicrobial agent

ZINC

- Component of plant enzymes and hormones
- Assists in the photosynthesis process
- Helps vegetables withstand environmental stresses
- Yellow foliage may represent zinc deficiencies
- Zinc helps with plant health and vitality

TIN

- Helps plants absorb nutrients from the soil
- Improves soil structure, allowing air, water and nutrients to be taken up by the plant
- An important metal to improve plant growth

NICKEL

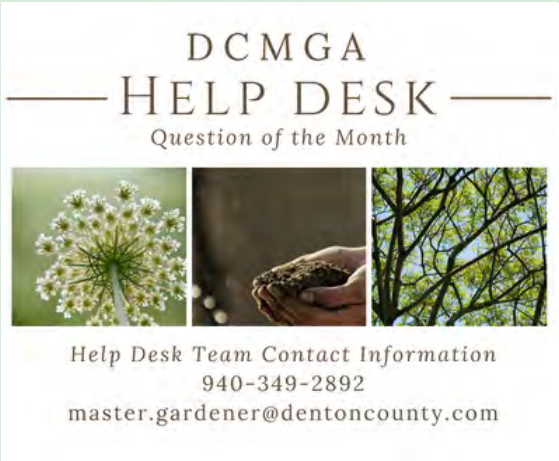
- Most plants need very little nickel to thrive
- Leguminous crops, such as beans and cowpeas, require more nickel than other crops
- Plays an important role in nodulation and nitrogen fixation
- Oxidizes to unavailable forms in the soil

BRONZE

- Metal alloy of copper, tin and other metals or metal lids
- Used in making garden statues
- Can alter the composition of soil

Resources

- Abdelbar, M., & El-Shamy, A. M. (2024). Understanding soil factors in corrosion and conservation of buried bronze statuettes: insights for preservation strategies. Scientific Reports, 14(1). https://doi.org/10.1038/s41598-024-69490-5
- Essential nutrients for plants. (2014). In Texas a&M AgriLife Extension Service [Book]. https://agrilifeextension.tamu.edu/wp-content/uploads/2023/08/ESC-009-essential-nutrients-for-plants.pdf
- Mahajan, U., Dhonde, M., Sahu, K., Ghosh, P., & Shirage, P. M. (2024). Titanium nitride (TiN) as a promising alternative to plasmonic metals: a comprehensive review of synthesis and applications. Materials Advances, 5(3), 846–895. https://doi.org/10.1039/d3ma00965c
- Micro- and secondary macronutrients. (n.d.). UMN Extension. https://extension.umn.edu/nutrient-management/micro-and-secondary-macronutrients
- Soils & Plant Nutrients | NC State Extension Publications. (n.d.). https://content.ces.ncsu.edu/extension-gardener-handbook/1-soils-and-plant-nutrients
- Soils, Plant Nutrition and Nutrient Management | MU Extension. (2017, January 1). https://extension.missouri.edu/publications/mg4#:~:text=In%20alkaline%20soils%20(pH%20is,with%20legumes%20than%20with%20nonlegumes
- Stephanie Meredith. (2019, April). The history of US circulating coins. The United States Mint. Retrieved May 12, 2025, from https://www.usmint.gov/learn/history/us-circulating-coins



QUESTION: I bought some frost cloth to cover my plants during our winter freeze. Can I use that to harden off my seedlings and to shade my garden during the summer heat?

ANSWER: While frost cloth is typically used in extreme winter weather and for season extension in the spring/fall to protect plants from potential damaging frosts, shade cloth is typically used over the summer. Allow me to explain the differences in how they protect our gardens.

Frost cloths, also called frost blankets or row covers, are white, gauze-like, non-woven fabrics made from spun-bonded polyester or polypropylene. Air, sunlight, and water can penetrate the material. They can be used to protect against two types of cold events that can damage plants in Texas: advective freezes ("freezes") and radiative frosts ("frosts"). They can be draped over a plant, or row of plants, with or without hoops or frames. These covers are not used to provide insulation, but to slow the plant's cooling. When secured to the ground, it can trap the radiant energy rising from the ground around plants, thus warming the plant's environment and mitigating the cooling effect of the weather.

- **Freezes are a sudden, steep plunge in temperature with deep masses of cold air blowing more than 4 mph. Clouds and precipitation may accompany a freeze at its onset, which can persist for several days. Freezes are harder to protect against than frosts because their winds displace heat and quickly cool a plant's tissues. Double layers of row covers will provide even more protection when temperatures drop below 28°F. Also, full water containers or small heat-emitting lights will radiate heat during the night, causing a greenhouse effect, when placed under the frost cloth.**
- **Frosts occur when the sky is clear and winds are less than 4 mph. During an extended frost event, remove the row cover during the day to allow the sun's radiation to heat the plants and soil; after the warmest part of the day, the cover should be re-secured to prevent nighttime loss of radiation back to the sky.**

Help Desk (Cont.)

A plant's contact with bedsheet covers that are dampened, either by precipitation or condensation, can result in frost damage. Plastic row covers can, likewise, transfer damaging cold temperatures to a plant if it touches its foliage. Even with the use of hoops, plastic row covers are discouraged because of their lack of air and water penetration.

Frost cloths are available with increasing density, and the heavier fabrics protect best, though air circulation may be hindered with increasing density.
Row cover life is typically 1-3 years depending on the weight, use, and weather conditions.

- Light-weight: (0.45 oz./sq. yd.) are marketed as "insect barriers," have 90%-95% light transmittance and give 2°F of frost protection.
- Medium weight: (0.5-1.0 oz./sq. yd.) have 70%-85% light transmittance, and give 4-6°F of frost protection. For spring/fall crops and overwintering.
- Heavy-weight: (1.5-2.2 oz./sq. yd.) allow 30-50% light transmittance, and give up to 8°F of frost protection. For overwintering crops.
- For insect pollinated vegetables, like the nightshades (tomato, eggplant, pepper) and cucurbits (squash, cucumber, pumpkin, melon), row covers should be removed in the morning after female flowers bloom to allow for pollination when bees are most active, replacing the cover in the afternoon.
- For vegetables that don't rely on insect pollination (beans, leafy greens, cabbage, potato) you can replace row covers with a fine insect netting, which might also be called insect barrier.

Both frost cloth and shade cloth can reduce water needs by reducing evaporation from the soil and from the plant, can extend the growing season by warming (frost cloth) or cooling (shade cloth) the area beneath the cover, and may expand the types of plants that can be grown due to this respective increase or decrease in temperature or sun exposure.
Too much sun can stress plants. Michael Arnold, Ph.D., director of The Gardens and professor in the Texas A&M College of Agriculture and Life Sciences Department of Horticultural Sciences warns, *"Once we pass the upper-90s during the day and mid-70s at night, plants can struggle with natural processes like photosynthesis, and that reduces vigor."* If your garden is not reaching its full potential, a little shade might do some good.

Help Desk (Cont.)

Shade cloth, or shade fabric, is usually a woven or knitted, UV stabilized, polyethylene or polypropylene material that limits the amount of light passing through by blocking or reflecting some amount of sunlight. If used properly, it reduces temperatures where it produces shade and can prevent sunburn damage to your plants and their fruits.

Shade cloth may be used in the spring to extend the growing season for cool season crops into warmer months or in the summer to protect warm season crops, like tomatoes and peppers, from intense heat that could cause plants to abort flowers and fruit or to experience physiological disorders like sunscald. With cool season crops, the use of shade cloth could prevent greens, herbs and brassicas (cruciferous vegetables) from bolting or going to seed prematurely and might also prevent some vegetables from developing a bitter flavor. Shade cloth densities range between 10%-70%. The percentages do not directly translate to heat reduction; for example, a 30% shade cloth allows 70% light through, however, a 30% shade cloth does not equal a 30% reduction in temperature. Delicate seedlings and cooler season plants, like lettuce and spinach, will benefit from more shade (50–60% shade cloth), while sun-loving plants like fruits, tomatoes and peppers, would do better with less blockage (20–40% shade cloth).

Besides using shade cloth, you can achieve shade in your garden through thoughtful design by placing smaller, more sun/heat-sensitive plants in the shade produced by larger, hardier plants that can better handle our extreme afternoon temperatures. Protect plants from heat stress, also, by fertilizing at recommended rates, using mulch, and watering early in the morning.

Resources

- https://agrilifetoday.tamu.edu/2025/01/16/prepare-for-winter-weather/
- https://travis-tx.tamu.edu/about-2/horticulture/plant-problems-and-maintenance/frosts-and-freezes/
- https://extension.unh.edu/blog/2020/10/using-row-covers-garden
- https://agrilifetoday.tamu.edu/2022/07/14/tips-for-gardeners-during-a-texas-heat-wave/
- https://www.uwyo.edu/barnbackyard/_files/documents/magazine/2021/summer/0721shadecloth.pdf
- https://ucanr.edu/blog/hort-coco-uc-master-gardener-program-contra-costa/article/beat-heat-shade-cloth
- https://s3.wp.wsu.edu/uploads/sites/2083/2023/07/23-07-30-Shade-Cloth.pdf

Denton County Master Gardener Association

UPCOMING EVENTS-PUBLIC INVITED!

COMMUNITY STRONG FARM

GROWING VEGETABLES FOR LINDA TUTT HIGH SCHOOL STUDENT RUN GROCERY & FIRST REFUGE FOOD BANK. TASKS FROM SOIL PREP TO HARVESTING. SHORT EDUCATION ON THE TASKS OF THE DAY. COME LEND A HAND.
1350 MILAM RD E. SANGER, MONDAY MORNINGS 9AM-11AM

LLELA NATURE PRESERVE WORKDAY

LAKE LEWISVILLE ENVIRONMENTAL LEARNING AREA
201 E JONES ST. LEWISVILLE, TX 75057, WEDNESDAYS 9AM-12PM

FMFB COMMUNITY GARDEN WORK DAY

COME JOIN US AT THE COMMUNITYY GARDEN THURSDAYS 9AM-11AM
1901 TIMBER CREEK RD FLOWER MOUND, TX

JUNE 11 — **GENERAL MEETING: MUST-HAVE PLANTS FROM THE DALLAS ARBORETUM!**

JOIN DALLAS ARBORETUM DOCENTS DENISE AND MAX DAVIS AS THEY SHARE THEIR FAVORITE RESILIENT PLANTS FOR NORTH TEXAS. MANY HAVE BEEN TESTED IN THE ARBORETUM'S PLANT TRIAL PROGRAM AND WITHSTAND EXTREME WEATHER WHILE STAYING BEAUTIFUL. PROGRAM BEGINS AT 10:00 AND IS FOLLOWED BY THE BUSINESS MEETING. PUBLIC IS INVITED TO ATTEND.
SOLOMON'S PORCH, GLOBAL SPHERES CENTER 7801 S. INT. 35 CORINTH 10AM-12PM

JUNE 13 — **WATER-WISE GARDENING: SAVE WATER, GROW GREEN!**

JOIN US FOR "INTRODUCTION TO WATER CONSERVATION," PRESENTED BY DENTON COUNTY MASTER GARDENER JEFF HARDGRAVE. LEARN EFFICIENT WATERING TECHNIQUES, DROUGHT-TOLERANT LANDSCAPING, RAINWATER HARVESTING, AND MORE! DON'T MISS THIS VALUABLE EVENT! 9AM-10AM
CO-SPONSORED BY THE DENTON SENIOR CENTER. 509 BELL AVENUE, DENTON

JUNE 13 — **GARDENING MADE EASY: TIPS & TECHNIQUES FOR A LOW MAINTENANCE GARDEN**

JOIN US IN PILOT POINT FOR "GARDENING MADE EASY: PRESENTED BY DENTON COUNTY MASTER GARDENER RENE HILLIARD! RENE WILL SHARE SIMPLE, PRACTICAL STRATEGIES TO CREATE A BEAUTIFUL, LOW-MAINTENANCE GARDEN. FROM CHOOSING THE RIGHT PLANTS TO EASY WATERING TIPS AND NATURAL PEST CONTROL, YOU'LL WALK AWAY WITH GREAT IDEAS TO ENJOY GARDENING WITHOUT THE HASSLE. 2PM-3PM
PILOT POINT COMMUNITY LIBRARY 324 S. WASHINGTON ST. PILOT POINT

JUNE 18 — **CATCH IT WHILE YOU CAN: RAIN HARVESTING**

JOIN MASTER GARDENER JEFF HARDGRAVE FOR AN INFORMATIVE PRESENTATION ON RAINWATER HARVESTING. REDUCE WATER BILLS AND CONSERVE WATER SUPPLIES. EXPLORE VARIOUS DESIGN OPTIONS AND RECEIVE STEP-BY-STEP GUIDANCE ON BUILDING YOUR OWN RAIN BARREL SYSTEM. HOSTED BY THE CITY OF CARROLLTON. 6PM-7PM
ROSEMEADE RECREATION CENTER 1330 E ROSEMEADE PKWY CARROLLTON

JUNE 20 — **PLANT PROPAGATION**

JOIN DENTON COUNTY MASTER GARDENERS AND LEARN THE BASICS OF PLANT PROPAGATION TECHNIQUES FOR SEED STARTING, CUTTING, LAYERING AND DIVISION. PLUS, YOU'LL GET TIPS ON SOIL MIXES AND USING ROOTING HORMONES. THEY'LL SHARE SOME GREAT RESOURCES FOR FURTHER LEARNING. 2PM-3:30
PILOT POINT COMMUNITY LIBRARY 324 S. WASHINGTON ST. PILOT POINT

TEXAS MASTER GARDENER

Mission Statement

As Master Gardeners, our mission is to educate and inspire Denton County residents through research-based horticulture, to promote eco-friendly gardens and enduring landscapes that enrich our communities.

Extension EO/EEO Statement

Texas A&M Agrilife Extension provides equal opportunities in its programs and employment to all persons, regardless of race, color, sex, religion, national origin, disability, age, genetic information, veteran status, sexual orientation, or gender identity. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts Cooperating.

2025 Board of Directors

President	Raeline Nobles
Vice-President	Jeff Hardgrave
Secretary	Lori Barr
Treasurer	Dale Powell
Communications	Donna Hull
Education	Ellen Gauntt
Outreach	Bonnie Ambrose
Member-at-Large	Brenda Martin
CEA-Horticulture	Erin Smith

Social Media

Facebook:
https://www.facebook.com/DentonCountyMGA

Instagram:
https://www.instagram.com/DentonCountyMGA

X (formerly *Twitter):*
https://twitter.com/DentonCountyMGA

Pinterest:
https://www.pinterest.com/DentonCountyMGA

YouTube:
http://www.youtube.com/c/DentonCountyMasterGardener

Save the Date

June 11 General Meeting & Program, "Tough & Beautiful: Must-Have Plants from the Dallas Arboretum!" by Denise & Max Davis. Open to the public.

July 9 General Meeting & Program, "The Journey of Your Water & Why Conservation Matters!" by Blake Alldredge. Open to the public.

Contact Information

Texas A&M AgriLife Extension
Hulcher Services Building
611 Kimberly Drive
Bldg. B
Denton TX 76201-9026

Office: 940.349.2883

Help Desk:
940.349.2892
master.gardener@dentoncounty.gov

Webmaster:
dcmga.webmaster@gmail.com

Communications:
dcmga.communications@gmail.com

Website:
https://dcmga.com

Content

The Submission deadline for the July edition of *The Root* is Thursday, June 5. Submissions may be revised at the discretion of the editor.

Ideas, photos, and articles are welcome and may be submitted to Communications Director Donna Hull at doctorhulld@gmail.com .

Unless otherwise attributed, all photos are courtesy of Denton County MGA.